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Reactor Mass Flow Data Base Prepared for the Nonproliferation Alternative Systems Assessment Program

R. T. Primm, III

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REACTOR MASS FLOW DATA BASE PREPARED FOR THE NONPROLIFERATION ALTERNATIVE SYSTEMS ASSESSMENT PROGRAM

R. T. Primm, III

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REACTOR MASS FLOW DATA BASE PREPARED FOR THE NONPROLIFERATION ALTERNATIVE SYSTEMS ASSESSMENT PROGRAM

R. T. Primm, III

ABSTRACT

This report presents charge and discharge mass flow data for reactors judged to have received sufficient technical development to enable them to be demonstrated or commercially available by the year 2000. Brief decriptions of the reactors and fuel cycles evaluated are presented. A discussion of the neutronics methods used to produce the mass flow data is provided. Detailed charge and discharge fuel isotopics are presented. U_3O_8, separative work, and fissile material requirements are computed and provided for each fuel cycle.

INTRODUCTION

One goal of the Nonproliferation Alternative Systems Assessment Program (NASAP) was to evaluate the fuel cycle costs and resource requirements of various nuclear reactors and fuels. To accomplish this goal, reactor charge and discharge mass flow data were generated for several types of reactors and for several different fuel cycles. These data were summarized in Volume IX of the NASAP final report.* The purpose of this document is to present mass flow data for those reactors judged to be in an advanced state of technical development in greater detail than in the NASAP report and in a form believed useful to technologists.

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*U.S. Department of Energy, Nuclear Proliferation and Civilian Nuclear Power - Report of the Nonproliferation Alternative Systems Assessment Program; Volume IX: Reactor and Fuel Cycle Description, DOE/NE-0001/9 (June 1980).

1. NUCLEAR FUEL CYCLES CONSIDERED IN THE NONPROLIFERATION ALTERNATIVE SYSTEMS ASSESSMENT PROGRAM

1.1 Reactors

Many nuclear reactor designs were evaluated in the Nonproliferation Alternative Systems Assessment Program (NASAP). Several of these designs were judged to require many years of development before they could become commercially available. These designs were classified as advanced concepts and fuel cycle data for these reactors are not included in this report. Other reactors were judged to have received sufficient technical development to enable them to be demonstrated or commercially available in the near future (by the year 2000). Fuel cycle data for these reactors are included in this report. This section presents a brief description of the reactors for which fuel cycle data are provided.

The pressurized water reactor (PWR) is a commercially obtainable reactor which contains a core composed of oxide fuel pellets encased in Zircaloy tubes. The tubes are arranged in a square lattice, and light water (H_2O) under high pressure (2000 psi) serves as a moderator and coolant.

Hot water emerging from the reactor core flows through the tubes of a boiler and is then pumped back through the core. Lower-pressure water on the other side of the boiler tubes is converted to steam which turns a turbine that drives an electric generator.

The boiling water reactor (BWR) is also commercially available and, like the PWR, is fueled with oxide pellets encased in Zircaloy tubes. However, in a BWR the water is allowed to boil in the core, and the generated steam drives a turbine directly. There is no intermediate heat exchanger.

The advanced light water reactor (ALWR) is a modification of the PWR. Generally, ALWRs have higher conversion ratios than PWRs and, in some cases, the conversion ratio exceeds 1 (i.e., the reactor is a breeder). Those designs in which the breeding ratio is greater than or equal to 1 are also called light water breeder reactors (LWBR). However, since all ALWRs have similar fuel element designs, no distinction between a breeder and a reactor with a high conversion ratio relative to a PWR will be made in this report — both will be categorized as ALWRs.

Advanced light water reactors are similar to PWRs in that pressurized light water is circulated through the reactor core and is then sent to a steam generator. ALWRs differ from PWRs in that the fuel lattice is much drier (the water to non-water volume ratio of an ALWR is approximately one half the PWR value) and is constructed with a triangular pitch. Control rods composed of fertile material (usually thorium) provide reactivity control. However, conventional neutron poison control rods, similar to those used in PWRs, are still present in the reactor design and are used to maintain adequate shutdown margin. ALWRs differ from PWRs in that they contain radial and axial blankets.

The heavy water breeder reactor (HWBR) contains a core composed of uranium-233 and thorium oxide pellets encased in Zircaloy. Heavy water (D_2O) is used as a moderator and coolant. HWBRs would have a larger pressure vessel than a PWR, would have a larger lattice pitch and lower coolant velocity. The fuel pins would be arranged in a square lattice, but the HWBR core would contain 19 hydraulically separate annular shaped fuel lattice regions. The HWBR contains an intermediate heat exchanger and uses light water in the secondary loop.

The heavy water reactor (HWR), also known as the CANDU (CANadian, Deuterium oxide, natural Uranium) reactor, uses heavy water (D_2O) for both moderator and coolant. The pressurized heavy water coolant flows through horizontally-arranged pressure tubes which are located within a calandria (tank). The calandria also contains heavy water which serves as a moderator. Under normal operation, the moderator would have a relatively low temperature (less than 100°C) and would not be pressurized.

HWRs employ on-line refueling in which individual fuel channels are refueled without interrupting reactor operation. The HWR contains an intermediate heat exchanger and uses light water in the secondary loop.

The spectral shift control reactor (SSCR) is a PWR in which the conventional soluble boron reactivity control system is replaced with spectral shift control. A PWR uses soluble boron to capture excess neutrons thereby controlling the excess reactivity during fuel depletion. In spectral shift control, excess reactivity is reduced by adding heavy water to the reactor coolant. This shifts the neutron spectrum toward higher energy and results in increased absorption of neutrons in fertile material.

Consequently, additional fissile material is bred and the conversion ratio of the system is greater than that of a conventional PWR. When fresh fuel is loaded, the D_2O/H_2O ratio is large. As the operating cycle continues, H_2O is added to compensate for the depletion of fissile inventory and the build-up of fission product poisons. The SSCR contains an intermediate heat exchanger and uses light water in the secondary loop.

The high temperature gas-cooled reactor (HTGR) contains oxide fuel microspheres enclosed in graphite and inserted into hexagonal graphite blocks. The core is composed of vertical columns of hexagonal fuel blocks arranged on a uniform triangular pitch. A pressurized helium coolant flows downward through holes in the graphite blocks. The helium passes to a steam generator and then returns to the core.

The liquid metal fast breeder reactor (LMFBR) is fueled with oxide pellets which are contained in stainless steel fuel pins. The pins are arranged in a hexagonal lattice at a much tighter pitch than a PWR. Liquid sodium at near atmospheric pressure circulates through the core and serves as the coolant. No moderator is required as this is a fast reactor. The LMFBR contains two heat exchangers. The first is a sodium-to-sodium exchanger; the second is a sodium-to-water exchanger.

LMFBR core designs call for a central power-producing region surrounded radially and axially by fertile blankets. Some designs call for core and blanket material to be intermixed. These are labeled heterogeneous designs and have higher breeding ratios and larger fuel inventories than the homogeneous designs, which maintain core and blanket material in separate regions.

The gas cooled fast reactor (GCFR) also is fueled with oxide pellets encased in stainless steel pins. Pressurized helium is used as a coolant. There is only one helium/water heat exchanger instead of the two exchangers found in the LMFBR design. An additional difference between GCFRs and LMFBRs is that the surface of fuel rods in GCFRs is roughened to enhance the heat transfer between pin and coolant.

The fast mixed spectrum reactor (FMSR) is a variant of the LMFBR and GCFR homogeneous designs. In the FMSR, the blanket region contains a neutron moderator, such as beryllium or graphite. Fresh fuel, which is either natural or depleted uranium, is placed in the central portion of the

core where a fast neutron spectrum exists. Plutonium is bred and the fuel is then moved to the thermal blanket zone where the bred plutonium is fissioned. This design is based on metallic fuel and can use either sodium or helium as a coolant. The FMSR design calls for a longer fuel residence time and larger discharge exposure than any of the other reactor concepts described in this report.

A list of abbreviations for the various reactor types is given in Table 1.

1.2 Reactor Fuels

Selecting a particular type of reactor to evaluate does not determine the composition of the reactor fuel. Generally, any of the reactors mentioned earlier in this report can operate safely, if not efficiently, with many types of nuclear fuel. The NASAP considered a wide variety of nuclear fuels and this section will describe the characteristics of the fuels which were examined.

Nuclear fuel is defined as a material which contains at least one of three elements — thorium, uranium, and plutonium. Additionally, for a fuel to produce power, it must contain at least one fissile isotope. U-235 is the only naturally occurring fissile isotope. Three others (U-233, Pu-239, and Pu-241) can be produced in sufficient quantities so as to be available for use as nuclear fuel.

Usually, nuclear fuel contains at least one fertile component. Several fertile isotopes are known, but only two occur naturally in large quantities — thorium-232 and uranium-238.

Since uranium possesses both fissile and fertile isotopes and since the fissile-to-fertile ratio can vary in different types of nuclear fuel, it is necessary to specify this ratio when designating a nuclear fuel. For simplicity, four categories have been established and these are shown in Table 2. In this report, the term enriched will also be applied to fuels containing U-233 even though these fuels are not likely to be processed through an enrichment plant.

Plutonium also possesses fissile and fertile isotopes. However, in this report, no distinction is made between different types of plutonium which have different fissile-to-fertile ratios.

Table 1. Abbreviations for reactors, reactor fuels, and reactor fuel cycles

Abbreviation	Definition
ALWR	Advanced light water reactor
BT or BKT	Blanket
BWR	Boiling water reactor
C	Carbide fuel
D	Duplex pellet fuel
FMSR	Fast mixed spectrum reactor
FS	Semi-annual refueling
F18	18-month refueling
GCFR	Gas-cooled fast reactor
HE	Highly enriched
HM	Homogeneous core
HT	Heterogeneous core
HTGR	High temperature gas-cooled reactor
HWBR	Heavy water breeder reactor
HWR	Heavy water reactor
LE	Low enriched
LL	Low leakage fuel management in a PWR. Refers to placing partially burned fuel in the outermost radial positions to reduce neutron leakage
LMFBR	Liquid metal fast breeder reactor
LP	LMFBR large pin, 7.9 mm diameter
M	Metallic fuel
ME	Moderately enriched
N	Natural
OI	Out-In fuel management in PWR. Refers to placing fresh fuel in the outermost radial positions, thus reducing power peaking in central region
Pu	Plutonium
PWR	Pressurized water reactor
RPu	Recycle of plutonium
RUF	Recycle of fissile uranium
RUPu	Recycle of uranium and plutonium
RU5	Recycle of U-235 only
SC	Cobalt spikant added
SP	LMFBR small pin, 5.8 mm diameter
SSCR	Spectral shift control reactor
STI	Short term improvement to BWRs — reduction of U_3O_8 use by the addition of axial, natural uranium blankets
Th	Thorium
U	Uranium
U3	Uranium-233
U5	Uranium-235
X	Extended Exposure
15%	Reduction in U_3O_8 use by 15%
30%	Reduction in U_3O_8 use by 30%

Table 2. Terminology used in describing uranium fuels

Term	Fissile U/Total U ratio
Natural uranium	0.00711
Low enriched uranium	>0.00711 to 0.10
Moderately enriched uranium	>0.10 to 0.20
Highly enriched uranium	>0.20

Nuclear fuel can be produced in several chemical forms. Three which have received extensive experimentation are oxide, carbide, and metallic. Currently, all reactor fuel is supplied in oxide form. With the exception of the FMSR (which uses metallic fuel), all the mass flow data contained in this report are for oxide fuels.

Reactor fuels can be produced in several mechanical forms. Some of these have been discussed earlier. They include metallic sheets or pins which may or may not be encased in a cladding material, pellet fuel enclosed in pins, and coated microspheres encased in graphite blocks.

Other mechanical fuel types include uncoated microspheres encased in pins and duplex fuel. Duplex fuel refers to a metal clad pin which contains heterogeneous oxide pellets. Each pellet consists of a fertile inner core surrounded by a removable annulus composed of fissile material. A list of abbreviations for the various nuclear fuels is given in Table 1.

1.3 Reactor Fuel Cycles

The management of nuclear fuel inside and outside of a nuclear reactor influences the isotopic distributions reported in the mass flow data. The amount of energy generated by the fuel, along with the particular reactor/fuel design, determines the quantity of fissile material consumed or produced. The presence or absence of a reprocessing industry will determine which type of nuclear fuel is available and which type is

most economical to use. Several variations in reactor fuel cycles were considered and these will be briefly discussed.

Some fuel cycles presented in this report were prepared with the assumption that no reprocessing facilities were available. Once the fuel was discharged from the reactor, it was assumed to be sent to a waste storage facility and no further use was made of the remaining fissile material. If reprocessing does not exist, then there is an economic incentive to consume as much of the fissionable fuel as possible before discharge from the reactor. Consequently, some studies were made in which a nuclear fuel was irradiated to a higher exposure than would be economically optimal in a recycle economy.

Other fuel cycles were analyzed with the assumption that a reprocessing industry does exist. Several variants of reprocessing were examined. These include: recycle of U-235 with storage of other fissile isotopes, recycle of all fissile uranium with other fissile isotopes sent to another reactor, recycle of fissile plutonium with other fissile isotopes sent to another reactor, recycle of all fissile uranium and plutonium and recycle of all fissile uranium and plutonium with cobalt-60 added to serve as a diversion deterrent.

A list of abbreviations for the various reactor fuel cycles is given in Table 1.

2. METHODS OF ANALYSIS

The mass flow data contained in this report were contributed by several organizations. Table 3 shows the sources of this data. Since several different analysis techniques were used, a brief description of the neutronics methods will be presented in this section. All information was obtained from the source documents listed in Table 3. This section will not report the detailed calculational procedure used by each investigator, but will instead provide an overview of the sequence followed by each contributor.

2.1 Advanced Light Water Reactor[1-4]

Analysis of advanced light water reactors was performed by two installations. The Division of Naval Reactors of the Department of Energy (DOE) analyzed eight ALWR designs, and the Applied Physics Division of Argonne National Laboratory (ANL) analyzed seven ALWR designs. Different methods were used by these two organizations. Additionally, the Division of Naval Reactors did not use the same analysis techniques for all of the eight designs which they evaluated.

ALWR-1, -2, and -3 were evaluated using planar NOVA/SPRITE diffusion theory models and planar RCP Monte Carlo models of a cluster (assembly). The Monte Carlo models were used to normalize the diffusion theory models and to determine control rod worth and temperature defect. The diffusion theory models were used to calculate the nuclear performance of each design throughout the breeding cycle. The calculated conversion ratio of the diffusion theory cluster model was modified in a conservative manner to account for neutron leakage, grid material, and structure material that was not explicitly included in the conceptual design model.

Nuclear performance of the ALWR-4, -5, -6, and -8 designs was determined from point depletion calculations utilizing four neutron energy groups with breakpoints at 0.8 MeV, 5.33 KeV and 0.625 eV. The neutron cross sections used in these calculations were obtained from detailed Monte Carlo calculations of representative fuel assemblies. The point depletion results were used to estimate core reactivity levels, lifetime, breeding performance, and mass flows.

Table 3. Sources of reactor mass flow data

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
ALWR-1	HE U3, U5(Th)-RUF	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Seed blanket breeder enclosure 1	Fuel assemblies (modules) have two zones: an inner zone with $(U+Th)O_2$ rods and an outer zone with ThO_2 rods. Initial fuel loading is total U5 and U3 discharge from HEU5(Th) PWR.
ALWR-2	HE U5, U3(Th)-RUF	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Seed blanket prebreeder enclosure 2 and enclosure 3	Fuel assemblies are seed blanket design as described above but seed rod diameter is smaller. Initial loading is HEU5(Th).
ALWR-3	HE U3, U5(Th)-RUF	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Seed blanket breeder enclosure 2	Same design as enclosure 1 except that initial core charge comes from ALWR instead of PWR.
ALWR-4	HE U3(Th)-RUF	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Advanced breeder enclosure 5	Similar design as enclosure 1 except that initial core comes from duplex fueled PWR and that thorium blanket pellets would be at the top and bottom of seed rods. Also seed pin and blanket pins are larger than enclosure 1 and consequently fewer pins per assembly. Looser pitch than 1.
ALWR-5	ME U5, U3(U,Th)-D, RU5	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Backfit prebreeder enclosure 6: low-gain phase of high-gain converter scenario	Assembly design is seed blanket. Similar to enclosure 1 breeder except seed rods are alternating duplex pellet and thoria pellet. Design is backfittable to existing PWR. Same pitch as enclosure 1 breeder but more pins per assembly. Annual refueling.
ALWR-6	HE U3, U5(Th)-RUF	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Backfit breeder enclosure 6: high-gain phase of high-gain converter scenario	Same design as prebreeder for 6 except seed fuel is a homogenous mixture of U and Th and seed fuel has thorium pellets as reflectors. Semiannual refueling.
ALWR-7	ME U5, U3(U,Th)-RU5	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Prebreeder enclosure 7 type I module	Hexagonal assembly seed blanket with movable seed. Alternate Duplex pellet and Th pellet.

Table 3. Continued

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
ALWR-8	HE U3(Th)-RUF	Division of Naval Reactors, Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE October 19, 1978	Breeder enclosure 7 type I module	Hexagonal assembly seed blanket movable seed, homogeneous seed pellet. Same pitch as enclosure 1 but pin arrangement is different.
ALWR-9	Pu(U)-RPu	Argonne National Laboratory	Letter to I. Spiewak, ORNL from Y. I. Chang, ANL Jan. 8, 1979		Same fuel element design as ALWR-6.
ALWR-10	HEU3(Th)-RUF	Argonne National Laboratory	Letter to I. Spiewak, ORNL from Y. I. Chang, ANL Dec. 27, 1978		Same fuel element design as ALWR-6.
ALWR-11	HEU3(Th)-RUF, X(22)	Argonne National Laboratory	Letter to I. Spiewak, ORNL from Y. I. Chang, ANL Dec. 27, 1978		Same fuel element design as ALWR-6.
ALWR-12	HEU3(Th)-RUF, X(30)	Argonne National Laboratory	Letter to I. Spiewak, ORNL from Y. I. Chang, ANL Dec. 27, 1978		Same fuel element design as ALWR-6.
ALWR-13	MEU3(U,Th)-RUF	Argonne National Laboratory	Letter to I. Spiewak, ORNL from Y. I. Chang, ANL Jan. 8, 1979		Same fuel element design as ALWR-6.
ALWR-14	Pu(Th)-RPu	Argonne National Laboratory	Letter to I. Spiewak, ORNL from Y. I. Chang, ANL Jan. 8, 1979		Same fuel element design as ALWR-6.
ALWR-15	LEU3(U,Th)-RUF	Argonne National Laboratory	Letter to I. Spiewak, ORNL from Y. I. Chang, ANL Jan. 8, 1979		Same fuel element design as ALWR-6.
BWR-1	LEU5(U)	General Electric, Inc.	Letter to W. Hardie, HEDL from R. L. Crowther, GE Nov. 6, 1978		
BWR-2	LEU5(U)-STI	General Electric, Inc.	Letter to W. Hardie, HEDL from R. L. Crowther, GE Nov. 6, 1978		
BWR-3	LEU5(U)-X	General Electric, Inc.	Letter to W. Hardie, HEDL from R. L. Crowther, GE Nov. 6, 1978		
FMSR-1	NU	Brookhaven National Lab	Letter to I. Spiewak, ORNL from R. J. Cerbone, BNL Feb. 27, 1979		
GCFR-1	Pu(U)/Th/Th-RPu, HM	General Atomic Co.	"GCFR Information for NASAP Studies," General Atomic Co. May 24, 1978		

Table 3. Continued

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
GCFR-2	Pu(U)/U/U-RPu, HM	General Atomic Co.	"GCFR Information for NASAP Studies," General Atomic Co. May 24, 1978		
GCFR-3	Pu(Th)/Th/Th-RPu, HM	General Atomic Co.	"GCFR Information for NASAP Studies," General Atomic Co. May 24, 1978		
HTGR-1	LEU5(U)	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		
HTGR-2	MEU5(U,Th)	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		Once through cycle
HTGR-3	MEU5(U,Th)-FS	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		Once through semiannual
HTGR-4	MEU5(U,Th)-RU5	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		U-233 is stored
HTGR-5	MEU5(U,Th)-RUF	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		
HTGR-6	MEU5(U,Th)-RUF, FS	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		
HTGR-7	HEU5(Th)-RUF	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		Reference HTGR
HTGR-8	HEU3(Th)-RUF	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		
HTGR-9	Pu(Th)	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978		
HTGR-10	MEU3(U,Th)-RUF	General Atomic Co.	Letter to T. E. Collins, DOE from R. F. Turner, GA Oct. 17, 1978	Denatured U-233 cycle	

Table 3. Continued

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
HWBR-1	HEU3(Th)-RUF	Division of Naval Reactors Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE Oct. 19, 1978	Breeder enclosures 3 and 4	
HWR-1	LEU5(U)	Combustion Engineering, Inc.	CEND-379, "Conceptual Design of a Large HWR for U.S. Siting," N. L. Shapiro, J. F. Jesick, March 1979		
HWR-2	Pu(Th)-RPu	Combustion Engineering, Inc.	CEND-379, "Conceptual Design of a Large HWR for U.S. Siting," N. L. Shapiro, J. F. Jesick, March 1979		
HWR-3	MEU3(U,Th)-RUF	Combustion Engineering, Inc.	CEND-379, "Conceptual Design of a Large HWR for U.S. Siting," N. L. Shapiro, J. F. Jesick, March 1979		
HWR-4	MEU5(U,Th)-RUF	Combustion Engineering, Inc.	CEND-379, "Conceptual Design of a Large HWR for U.S. Siting," N. L. Shapiro, J. F. Jesick, March 1979		
HWR-5	Pu(U)-RPu	Combustion Engineering, Inc.	CEND-379, "Conceptual Design of a Large HWR for U.S. Siting," N. L. Shapiro, J. F. Jesick, March 1979		
HWR-6	MEU5(U,Th)-RUF,X	Combustion Engineering, Inc.	CEND-379, "Conceptual Design of a Large HWR for U.S. Siting," N. L. Shapiro, J. F. Jesick, March 1979		
LMFBR-1	Pu(U)/U/U-RPu, HT-LP	Westinghouse Corporation	Preconceptual Study of Proliferation Resistant Heterogeneous Oxide Fueled LMFBR Core, Westinghouse Corp., August 1978.		Internal blanket is U, NASAP case.
LMFBR-2	Pu(U)/U/U-RPu, HT-SP	Westinghouse Corporation	Preconceptual Study of Proliferation Resistant Heterogeneous Oxide Fueled LMFBR core, Westinghouse Corp., August 1978.		Internal blanket is U. Not used in NASAP economic evaluations.

Table 3. Continued

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
LMFBR-3	Pu(U)/Th/Th-RPu,HT-LP	Westinghouse Corporation	Preconceptual Study of Proliferation Resistant Heterogeneous Oxide Fueled LMFBR Core, Westinghouse Corp., August 1978.		Internal blanket is Th, NASAP case.
LMFBR-4	Pu(U)/Th/Th-RPu,HT-SP	Westinghouse Corporation	Preconceptual Study of Proliferation Resistant Heterogeneous Oxide Fueled LMFBR Core, Westinghouse Corp., August 1978.		Internal blanket is Th, not used in NASAP economic evaluations.
LMFBR-5	Pu(Th)/Th/Th-RPu,HT-LP	Westinghouse Corporation	Preconceptual Study of Proliferation Resistant Heterogeneous Oxide Fueled LMFBR Core, Westinghouse Corp., August 1978.		Internal blanket is Th.
LMFBR-6	MEU3(U)/Th,U/Th,U-RUF,HT,LP	Westinghouse Corporation	Preconceptual Study of Proliferation Resistant Heterogeneous Oxide Fueled LMFBR Core, Westinghouse Corp., August 1978.		Internal blanket is U and Th.
LMFBR-7	Pu(U)/U/U-RPu,HM	General Electric, Inc.	Preconceptual Design Study of Proliferation Resistant Homogeneous Oxide Fueled LMFBR Core, GEFR-00392, B. Talwar, October 1978.		
LMFBR-8	Pu(U)/Th/Th/-RPu,HM	General Electric, Inc.	Preconceptual Design Study of Proliferation Resistant Homogeneous Oxide Fueled LMFBR Core, GEFR-00392, B. Talwar, October 1978.		
LMFBR-9	Pu(Th)/Th/Th-RPu,HM	General Electric, Inc.	Preconceptual Design Study of Proliferation Resistant Homogeneous Oxide Fueled LMFBR Core, GEFR-00392, B. Talwar, October 1978.		
LMFBR-10	MEU3(U)/Th/Th-RUF,HM	General Electric, Inc.	Preconceptual Design Study of Proliferation Resistant Homogeneous Oxide Fueled LMFBR Core, GEFR-00392, B. Talwar, October 1978.		

Table 3. Continued

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
PWR-1	LEU5(U)	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-27, June 15, 1978	LEU once-through reference	Low enriched uranium case used in NASAP reports. See PWR-21.
PWR-2	LEU5(U)-X	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-54, Oct. 2, 1978		See PWR-24
PWR-3	LEU5, Pu(U)-RUPu	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-27, June 15, 1978	Pu,U self-generated recycle	Self-generated recycle case used in NASAP reports. See PWR-25.
PWR-4	LEU5, Pu(U)-RUPu,X	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-54, Oct. 2, 1978		
PWR-5	Pu(Th)-RPu	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-27, June 15, 1978		Generated U-233 is used in another reactor.
PWR-6	Pu(Th)	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-27, June 15, 1978		No recycle of Pu
PWR-7	Pu(Th)-RPu,X	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-54, Oct. 2, 1978		
PWR-8	Pu(Th)-X	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-54, Oct. 2, 1978		No recycle of Pu
PWR-9	Pu(U)-RPu	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-54, Oct. 2, 1978	Plutonium burner	
PWR-10	Pu(U)-RPu,X	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-54, Oct. 2, 1978		
PWR-11	MEU3(U,Th)-RUF	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-27, June 15, 1978	Denatured U-233	
PWR-12	MEU3(U,Th)-RUF, X	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-54, Oct. 2, 1978		
PWR-13	MEU5(U,Th)-RUF	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-27, June 15, 1978		

Table 3. Continued

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
PWR-14	LEU5(U)-15	Combustion Engineering, Inc.	Letter to W. Hardie, HEDL from R. A. Matzie, CE SPE-Th-63, Nov. 9, 1978		Fictitious case, examines 15% improvement in U_3O_8 use
PWR-15	LEU5(U)-30	Combustion Engineering, Inc.	Letter to W. Hardie, HEDL from R. A. Matzie, CE SPE-Th-63, Nov. 9, 1978		Fictitious case, examines 30% improvement in U_3O_8 use
PWR-16	LEU5, Pu(U)-RUPu, SC, CP	Combustion Engineering, Inc.	Letter to J. C. Cleveland, ORNL from R. A. Matzie, CE SPE-Th-78, Feb. 9, 1979		
PWR-17	LEU5(U)-18 month cycle	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-75, Feb. 5, 1979		
PWR-18	LEU5(U)-X, 18 month cycle	Combustion Engineering, Inc.	Letter to I. Spiewak, ORNL from R. A. Matzie, CE SPE-Th-75, Feb. 5, 1979		
PWR-19	HEU5(Th)	Divison of Naval Reactors Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE Oct. 19, 1978.	Prebreeder enclosure 1	
		Combustion Engineering, Inc.	EPRI NP-359, "Assessment of Thorium Fuel Cycles in Pressurized Water Reactors"		Conventional CE system 80 assembly
PWR-20	MEU5(U,Th)-RU5, D	Division of Naval Reactors Department of Energy	Letter to E. J. Hanrahan, DOE from P. R. Clark DNR-DOE Oct. 19, 1978	Prebreeder enclosure 5	Same assembly design as conventional B&W PWR but with duplex fuel and alternating Th pellet.
PWR-21	LEU5(U)	Combustion Engineering, Inc.	CEND-380, COO-2426-199 Draft report, "Uranium Resource Utilization in the Once-Through PWR Fuel Cycle," January 1980		Revision of PWR-1, data not used in any NASAP studies
PWR-22	LEU5(U)-OI, X	Combustion Engineering, Inc.	CEND-380, COO-2426-199 Draft report, "Uranium Resource Utilization in the Once-Through PWR Fuel Cycle," January 1980		Not used in any NASAP studies
PWR-23	LEU5(U)-LL, X	Combustion Engineering, Inc.	CEND-380, COO-2426-199 Draft report, "Uranium Resource Utilization in the Once-Through PWR Fuel Cycle," January 1980		Not used in any NASAP studies

Table 3. Continued

Reactor	Fuel cycle	Originator	Source document	Originator's designation	Comments
PWR-24	LEU5(U)-X	Combustion Engineering, Inc.	CEND-380, COO-2426-199 Draft report, "Uranium Resource Utilization in the Once-Through PWR Fuel Cycle," January 1980	Composite case	Revision of PWR-2, not used in NASAP studies
PWR-25	LEU5,Pu(U)-RUPu	Combustion Engineering, Inc.	CEND-380, COO-2426-199 Draft report, "Uranium Resource Utilization in the Once-Through PWR Fuel Cycle," January 1980	Composite case	Revision of PWR-3, not used in NASAP studies
SSCR-1	LEU5(U)	Combustion Engineering, Inc.	CEND-377, "Conceptual Design of a Large Spectral Shift Controlled Reactor," R. A. Matzie and G. P. Menzel		
SSCR-2	LEU5(U)-X	Combustion Engineering, Inc.	CEND-377, "Conceptual Design of a Large Spectral Shift Controlled Reactor," R. A. Matzie and G. P. Menzel		
SSCR-3	MEU5(U,Th)-RUF	Combustion Engineering, Inc.	CEND-377, "Conceptual Design of a Large Spectral Shift Controlled Reactor," R. A. Matzie and G. P. Menzel		
SSCR-4	MEU3(U,Th)-RUF	Combustion Engineering, Inc.	CEND-377, "Conceptual Design of a Large Spectral Shift Controlled Reactor," R. A. Matzie and G. P. Menzel	Denatured U-233 cycle	
SSCR-5	Pu(Th)-RPu	Combustion Engineering, Inc.	CEND-377, "Conceptual Design of a Large Spectral Shift Controlled Reactor," R. A. Matzie and G. P. Menzel		

Effective few group microscopic cross sections were generated using the RCP01 Monte Carlo program. The Monte Carlo model used 31 energy intervals to describe neutron energies between 0 eV and 10 MeV, with each interval having been previously divided into as many as 1000 subintervals to permit accurate representation through all resonances. The primary source of basic cross section information was the ENDF/B data libraries.

Detailed hexagonal fuel assemblies were represented in the RCP01 calculations. This included explicit geometric representation of fuel pellet, clad, moderator and, where appropriate, guide tube for each fuel-bearing and non-fuel-bearing rod in the assembly. From the isotopic reaction rates of these calculations, highly accurate few group microscopic cross sections, appropriate for an entire assembly, were generated for use in the point depletion model. To facilitate the rapid examination of a number of design concepts, several different RCP01 assembly calculations were performed to span the range of fuel temperature, moderator temperature and fuel-to-coolant ratio anticipated for the ALWR design concepts. In addition, heavy metal isotopic mixes characteristic both of initial loading and of equilibrium cycle loading were represented.

Few group microscopic data from the RCP01 Monte Carlo results were employed in the four group survey depletion model. In this model, depletion equations describing depletion chains for all important heavy metal isotopes and the dominant fission product chains for xenon and samarium were solved. Additional fission product absorption was incorporated via a residual fission product nuclide. The point depletion results were used to estimate core reactivity levels and lifetime and to provide isotopic ratios of the heavy metal isotopes as a function of fuel depletion. Breeding performance was evaluated from this depletion model with appropriate adjustments made to the calculated conversion ratios to account for leakage and noncritical reactivity levels in the computations. These estimates of the breeding performance and the isotopic ratios as a function of fuel depletion were then combined to obtain the desired core mass flow estimates.

Nuclear performance of the ALWR-7 was determined from three-dimensional diffusion theory (PDQ) module calculations utilizing four neutron energy groups with breakpoints at 0.8 MeV, 5.53 KeV and 0.625 eV. In

these calculations, the height of the movable fuel section of the module was adjusted throughout depletion to provide a critical configuration.

Neutron cross sections for these calculations were determined using the PAX03 computer program. The PAX03 program combines the calculations of fast spectrum with resonance effects and thermal spectrum and self-shielding. Geometric input to PAX03 consists of physical descriptions of the components of the module (e.g., a fuel cell comprised of a fuel pellet, clad, and associated water and a metal-water cell comprised of a guide tube and associated water) and the relative volumes of these components within the module. Heterogeneous resonance integrals are determined in PAX03 using a collision probability method based on the integral Boltzmann equation under the assumption of isotropy in both the lab and center of mass system. All scattering and slowing down sources are assumed to be flat over an individual region of the cell. Thermally, spatial shielding of the cross sections is treated using the Multiple-Sauer method. A point depletion capability in PAX03 was used to obtain cross section behavior as a function of time. The depletion model used in PAX03 was the same as that used in PDQ. In this four energy group model, depletion equations describing the depletion behavior for all important heavy elements and for the predominant fission products was solved. The fission product treatment used was the scheme presented in LA-6745-MS which represented the behavior of fission products using 11 major decay chains (28 fission product isotopes) and a twelfth fictitious chain accounting for the remaining nuclides.

The seven ALWR designs evaluated by ANL were all the same physical design as ALWR-6. However, each design had a different type of fuel.

Argonne's prediction of fuel cycle isotopics was based on a one-dimensional representation of a single fuel pin. This approach, utilizing the transport theory code EPRI-CELL, is predicated upon the assumption that a single pseudo-pin can approximate the effects of both the individual seed and blanket pins, seed pins being those fuel rods containing both fissile and fertile material, whereas blanket pins contain only fertile material. There are 510/108 seed/blanket pins in each assembly; the volume ratio is 4.34 (the blanket pins are slightly larger than the seed pins). The pseudo-pin is created by simply volume weighting the seed and

blanket pins into an equivalent pin such that 618 pseudo-pins would conserve the mass of the 510 seed and 108 blanket pins. The cladding thickness is arrived at in the same fashion: conserving the total volume of seed and blanket associated cladding.

The remainder of the unit cell consists of a moderator region and an extra region. The extra region represents the additional cladding from guide tubes, the hex can, etc. and the additional water hole contributions from withdrawn poison rods, blanket rods, etc.

The actual dimensions of the pseudo fuel pin and cladding are altered slightly from this straightforward weighting procedure by accounting for the fact that control is maintained by partial withdrawal of the ThO_2 blanket rods, in a much similar fashion to the conventional finger rods in a PWR. The time-dependent behavior of these rods is not specified, nor can it be represented via a one-dimensional calculation. Therefore, the pseudo-pin's dimensions were defined such that the amount of heavy metal present at the mid-burn point was conserved. This approach reduces the pseudo-pin volume slightly (~6%) in order to compensate for the withdrawn blanket rods. The remainder of the unit cell dimensions are defined such that the mid-burn core region volume fractions are obtained.

2.2 Boiling Water Reactor[5]

BWR lattice physics methods consist of a multigroup mixed one- and two-dimensional transport theory and transport corrected diffusion theory techniques. The epithermal spectrum is computed in 68 groups with determination of spatial weighting of the fuel, clad, and moderator, and evaluation of the two-dimensional Dancoff interaction between individual pins in the resolved resonance region. Resolved resonances are evaluated using the intermediate resonance (IR) approximation. The space-dependent thermal spectrum is computed by use of 30-group integral transport theory. Gadolinia rods are specially represented to include greater local spatial neutron spectrum detail and to permit space-dependent depletion calculations within the fuel pins. The "equivalence principle" was used to determine fissile loadings for each fuel design by establishing equivalence

to a reference BWR enriched uranium design so as to conservatively assure that the alternative designs achieve the same equilibrium fuel cycle energy as the reference design.

2.3 Fast Mixed Spectrum Reactor

No data was available concerning the neutronic analysis techniques used in evaluating the FMSR design.

2.4 Gas Cooled Fast Reactor[6]

An updated version of the FEVER code[7] was used to compute mass balances for the initial cycle and reload cycles. FEVER is a one-dimensional neutron diffusion-depletion code which calculates the neutron flux, the effective multiplication factor, the material composition, and the power for each of the specified subregions. The cross sections used in FEVER were obtained from ENDF-IV data.

The one-dimensional diffusion calculation is run in either radial or axial geometry, and the burnup equations are solved using the average fluxes in spatial regions defined by the user. A minimum number of these regions are usually defined by the axial and radial zoning of the fissile and fertile materials. Additional regions are often provided when the flux varies significantly with position within a region of constant feed composition. Within a single spatial region, there may be several different fuel compositions. In a radial geometry model, the control poison used in the criticality search may be represented in a fairly realistic way and a sequence of control rod withdrawals from successive regions can be simulated. The provisions for reloading and recycling fuel compositions are similar to GARGOYLE (see HTGR, Sect. 2.5) with the added capability of specifying the spatial distribution of the reloaded fuel. Fuel management schemes such as radial shuffling or axial push-through can be efficiently studied with such options.

Core geometry and fuel element dimensions for the first fuel cycle were obtained from CALIOP calculations. CALIOP balances the thermohydraulic design with fixed physics input parameters. The same basic

design was used for the rest of the fuel cycles studied. Consequently, no optimization of the various fuel cycles with respect to the thermal hydraulics was carried out.

Core enrichment zoning was determined using GAUGEF, a two-dimensional burnup code. The GAUGEF code provides a coarse uniform hexagonal mesh and includes a depletion calculation and a control poison search option. GAUGEF also provides a source calculation in which the source may be distributed by region or mesh point and by energy group. The GCFR version contains 10 energy groups, no upscatter, and an adjoint calculation option.

2.5 High Temperature Gas-Cooled Reactor[8]

Zero-dimensional depletion codes were used for survey calculations to study alternative fuel cycles and identify the optimum cases for further detailed calculations. The term "zero-dimensional" implies a single homogeneous composition used in calculating the multigroup flux spectrum. The burnup equations may then be solved for a number of separate regions having different compositions, using this same flux spectrum in all regions. The new compositions are then homogenized for the next flux calculation. The most typical example is the analysis of a "graded" fuel cycle in which a fraction of the reactor core is reloaded at periodic intervals, so that at any point in time the core is composed of fuel of several different burnup exposures (typically 3 to 6 compositions in an HTGR). If such a reloading procedure is continued for a number of reload periods equivalent to several complete core replacements, an "equilibrium" cycle is reached in which the feed and discharged fuel compositions at each refueling interval are the same.

The GARGOYLE[9] code was used at General Atomic to study the fuel cycle during the approach to the equilibrium cycle. Since the feed fuel composition may be different at each refueling interval until the equilibrium cycle is reached, GARGOYLE includes the provision of searching for the feed fuel composition necessary for criticality, as well as the control poison search usually provided in depletion codes. Provision is also made for recycling some or all of the fuel material discharged at one refueling interval at a subsequent point in time.

The GARGOYLE code provides a variety of options for specifying self-shielding factors. In the case of plutonium fuel, the large thermal energy resonances cause self-shielding effects that vary rapidly with energy, concentration and fuel geometry. To develop the data necessary to prepare the self-shielding factors for GARGOYLE, a version of the MICROX spectrum code called MICROBURN[10] has been written. MICROX solves the integral transport equation in a two-region unit cell. The coupling between the two regions is by collision probabilities based on the assumption of a flat source in both regions. The formulation of the collision probabilities includes an energy-dependent Dancoff correction. The most typical unit cell would be a fuel region surrounded by a moderator or coolant region. In the case of the HTGR, the presence of additional heterogeneity in the form of fuel grains is accounted for by computing energy-dependent grain self-shielding factors and homogenizing the grains prior to beginning the spectrum calculation. The neutron energy spectrum is obtained in each region and the depression of the flux in one region due to resonances of a material in the other region is properly included, as are the effects of overlapping resonances of one or more materials. The broad group cross sections for use in subsequent reactor calculations are obtained by averaging the pointwise cross sections over both region and energy. In MICROBURN, the MICROX two-region flux spectrum calculation including fuel grain and rod heterogeneities is coupled to a burnup code and used to determine how the shielding factors of the plutonium isotopes vary with burnup as a function of feed compositions and grain sizes.

2.6 Heavy Water Breeder Reactor[11]

The physics methods used to analyze the HWBR are the same as those used to analyze ALWR designs 1 through 3.

2.7 Heavy Water Reactor[12,13]

All HWRs were analyzed by Combustion Engineering. The general approach used in the fuel-enrichment evaluation was to perform fuel-cycle

calculations parametric in initial enrichment, and to establish the resulting discharge fuel burnup. These fuel-cycle calculations were performed for a cluster-cell (assembly) geometry using the DIT-HWR code.[14] The DIT-HWR code, described in greater detail below, is used to generate the assembly spectra and few-group cross sections for heavy water reactor lattices.

Initially, space-dependent 85-group spectra are calculated in a one-dimensional representation of the cluster cell. An average fuel pin is represented explicitly and the remainder of the HWR cluster (assembly) is homogenized into concentric rings around the fuel pin.

These spectra are then used for condensation of cross sections (ENDF/B-IV) to a four-group structure employed in the detailed spatial calculation. The detailed spatial calculation is performed for the exact geometry of the HWR cluster, using integral transport theory. The resulting reaction rates are used for pin-by-pin depletion of the fuel.

The assumption is made that although a fuel bundle may be a net producer or absorber of neutrons at any particular burnup, there is another bundle elsewhere in the reactor absorbing or producing enough neutrons to eliminate any net excess or deficit. This is equivalent to assuming that excess neutrons produced early in the cycle are saved for later in the burnup where the fuel produces less neutrons than are absorbed. The burnup limit is reached when this reserve of neutrons is depleted.

DIT is an assembly spectrum code based on integral transport theory which is used to generate two- or four-group cross section data for spatial design codes. The code consists of three major components: a spectrum calculation in approximate assembly geometry, a spatial calculation in the exact assembly geometry, and a depletion calculation.

Spectrum calculations are performed in an 85-group structure for selected geometries which are portions of the assembly. The 85-group cross sections are condensed to a few groups, and an assembly calculation is performed using integral transport methods. An 85-group B1 calculation with a buckling search is used to account for leakage and to maintain criticality. Depletion calculations are performed for each pin, and editing routines supply cross sections for spatial calculations.

DIT depletion calculations and additional spectrum calculations at selected time points were performed for different enrichments, soluble boron levels, fuel temperatures, moderator temperatures, etc. From these calculations, cross section tables functional in the various core parameters were constructed.

Three dimensional spatial effects were examined through the use of a diffusion code using a mesh-centered finite difference formulation in the x-y plane and a continuous solution (via Fourier expansion) in the axial direction. The code was used in a coarse-mesh mode with one mesh point per assembly. A macroscopic cross-section model with cross sections as a function of burnup, local power density and moderator temperature or density was available. Cross sections for this model were generated using the DIT code.

2.8 Liquid Metal Fast Breeder Reactor[15,16]

Two LMFBR core designs were evaluated — a heterogeneous design in which core and blanket fuel were placed in alternating, concentric rings and a homogeneous design in which all blanket fuel was placed external to the core region. Westinghouse Corporation generated mass flow data for the heterogeneous designs. General Electric Company provided homogeneous mass flow data.

The homogeneous nuclear evaluations are based on the ENDF/B-IV neutron cross section data file. Six-group, transport-corrected, P_0 cross sections were used in the calculations. The two-dimensional SN2D code[17] was used in its diffusion mode to predict the flux and power distributions. Fuel burnup calculations were performed with the FUMBLE code.[18]

Two-dimensional R-Z models were used in the nuclear analysis of the homogeneous LMFBR cores. The full core height was modeled since the control assemblies were parked in the upper axial blanket during burn. The core geometry and atom densities included the effect of thermal expansion.

The calculational strategy employed by Westinghouse for the prediction of the heterogeneous LMFBR nuclear characteristics initiates with the MINX code.[19] MINX calculates group constants (infinitely dilute group

cross sections, inelastic scatter transfer matrices, and temperature dependent self-shielding factors) as a function of σ_0 for nuclear reactor calculations from microscopic ENDF/B-IV data files. The actual processing of the pointwise data is performed at LASL and is supplied to Westinghouse in the Bondarenko format. The resulting 50-group cross section library is further processed in the SPHINX code[20] for reactor application. Using atom densities and cell models characteristic of the reactor, composition- and isotope-dependent resonance self-shielding factors are calculated as a function of temperature in the SPHINX resonance module. A Dancoff correction is also applied to the cross sections based on Sauer's approximation for a cylindrical fuel pin in a hexagonal lattice. The cross sections are then corrected for elastic removal and collapsed to 9 or 23 energy groups over the local reactor spectrum in the SPHINX diffusion module.

The resulting master cross section library is employed in the 2DB code[21] in both hexagonal-planar and RZ (cylindrical) geometry to determine critical eigenvalue and breeding ratio, perform burnup calculations, and to determine radial and axial power and flux distributions and control rod parameters. Fuel enrichments are determined using 2DB (hex) diffusion theory enrichment search calculations wherein the critical feed enrichment of fresh fuel assemblies is determined by exchanging fissile atoms for fertile atoms until the resulting core mix produces the required critical eigenvalue, k_{eff}. Reactor depletion, breeding ratio, and power distribution calculations are performed in two-dimensional hex and RZ geometry using the 9-group master cross section library. Primary control rod bank insertion is changed to maintain a critical system. Each of the fuel and blankets is burned as a separate zone in order to accurately model the spatial dependence of the fuel depletion and blanket fissile accumulation. Axial leakage in the hexagonal calculations is modeled with a region-dependent buckling determined from an equivalent RZ geometry calculation.

2.9 Pressurized Water Reactor[22,13]

Most of the PWR data were generated using the Combustion Engineering lattice cell code, CEPAK, and the few-group spatial diffusion code, PDQ. Two-dimensional core calculations were performed for the early cycles of

each fuel cycle. These calculations were required, not only to obtain estimates of the fuel performance during the early cycles, but also to obtain representative operating history, in terms of burnable poison rundown and interbatch neutron leakages, for use in the analysis of later cycles with a less detailed point reactor model. Use of a point reactor model was necessary for all but the early cycles because of the large number of calculations required to obtain 30-year fuel inventories for each fuel cycle.

The CEPAK lattice cell code is a combination of several integrated program modules including THERMOS,[23] FORM,[24] and CINDER.[25] The CEPAK input consists of differential cross section libraries, reactor core and lattice geometry data, and parameters describing the operating conditions of the reactor. The energy spectrum is partitioned into 83 groups covering the energy range from 0 to 10 MeV. The thermal flux calculation is performed in THERMOS with 29 energy groups and a one-dimensional model comprised of fuel, clad, and coolant. The epithermal calculation is carried out in FORM for a homogenized cell utilizing 54 energy groups. The B-1 approximation is used to account for leakage effects throughout the entire energy range. Fuel depletion calculations are performed in CINDER using the few group cross sections and fluxes obtained from the thermal and epithermal spectrum calculations. The output of CEPAK consists of material inventory data, fuel exposure information, and reactivity as a function of fuel depletion. In addition, burnup-dependent, few-group microscopic cross sections and diffusion constants are generated for use in core spatial calculations.

To compare the CEPAK results for various fuel cycles, a definition of batch lifetimes must be derived which is consistent with the lifetime that is achieved in an operating core. The lifetime of a core composed of several batches is typically determined by an end of cycle (EOC) eigenvalue of one. The core EOC eigenvalue is defined as the weighted batch eigenvalues. For PWRs, the core EOC eigenvalue is given by

$$\overline{k}_\infty = \sum_{j=1}^{J} f_j \, k_\infty(E_j)$$

where f_j is the fraction of fuel resident in the reactor for j cycles and k_∞ (E_j) is the EOC infinite multiplication factor of a fuel batch with a burnup of E_j at end of cycle j. The target multiplication factor, $k_{\infty T}$, for the fuel batch is obtained by using the predicted fuel enrichment and boron rundown from a reference spatial calculation in a CEPAK depletion. This target value is then used for subsequent calculations and the lifetime is found by requiring that $\overline{k}_\infty = k_{\infty T}$.

Depletion calculations to determine the fuel loading requirements of a reactor must be performed in a critical spectrum; failure to do so will result in either a surplus or a deficiency of neutrons during the depletion and will lead to an erroneous conversion ratio and associated mass flow data. In the conventional PWR, excess neutrons are lost either through leakage or through capture in the soluble boron poison introduced for this purpose. Consequently, conventional PWR point reactor calculations can employ approximate representations of core leakage and utilize a search for critical boron concentration, or alternately use approximate boron concentrations and search for critical neutron leakage in order to achieve a critical spectrum during depletion.

Although CEPAK can be used to predict core related quantities such as fissile loadings, cycle lengths, and material inventories, spatially dependent parameters must be determined by multi-dimensional methods. Therefore, information about power distributions, core operating characteristics, and safety-related physics parameters was obtained using the few-group diffusion code PDQ.[26]

PDQ solves the neutron diffusion-depletion problem in one, two, or three dimensions through finite difference techniques. A maximum of five lethargy groups can be employed, with the thermal neutrons being represented by one lethargy group or two overlapping groups. Adjoint or boundary value problems may be calculated in rectangular, cylindrical, spherical or hexagonal geometry. PDQ utilizes macroscopic data generated by CEPAK and passed through the Harmony code.[27] Given the operating history (e.g., soluble boron rundown, power level, depletion schedule, etc.), PDQ calculates the core reactivity, the neutron flux, pointwise power level and nuclide number densities.

The initial cores of the PWR cases presented in this report were calculated using a two-dimensional, four-group quarter-core PDQ model. Each assembly was individually modeled in the core along with the reflector and shroud. The System 80™ fuel assembly and control rod channels were homogenized together with the surrounding water gap and were represented by a 4 × 4 nodal array. This coarse mesh model accurately predicts core reactivity rundown, nuclide concentrations and assembly power while reducing computer time requirements as compared to fine mesh calculations in which each fuel pin and water region are more explicitly modeled.

One PWR case, PWR-23, was not calculated with the previously described CEPAK-PDQ scheme. ROCS, a two-group spatial diffusion code, was used to provide mass flows for this case.[28] The fuel assembly spectrum code DIT (see Sect. 2.7) was used to generate the few-group cross sections for the ROCS core model. DIT was used to generate these cross section tables instead of CEPAK since DIT explicitly models water holes and shims. As a result, the spectrum effect due to shims and water holes is incorporated directly into the cross sections rather than being included through correction factors as is the case for CEPAK. This is particularly important when analyzing low-leakage fuel management schemes because of the extensive use of burnable poison shims.

ROCS, a multi-dimensional, coarse-mesh code, models each assembly as a 2 × 2 nodal array, with each node centrally located in the quarter assembly. ROCS employs two energy groups in the solution of the diffusion equation. The reflector and shroud regions are not explicitly represented, but rather are modeled through node dependent albedo boundary conditions. This reduces the number of nodes for solution and hence reduces the computer time requirements. ROCS calculations can be performed with a variety of feedback options including moderator temperature, fuel temperature and xenon feedbacks which allow variation of these parameters between maneuvers (depletion steps). ROCS requires operating history in the form of soluble boron rundown and buckling values from which it calculates nuclide number densities, reactivities and assembly power levels.

2.10 Spectral Shift Control Reactor[22]

All SSCR fuel cycles presented in this report were investigated by Combustion Engineering (CE). The principal analytic tools used were the lattice cell code, CEPAK, and the few-group spatial diffusion code, PDQ. These codes have been described previously in Sect. 2.9. However, to adequately model SSCRs a number of items, such as deuterium cross sections and D_2O concentration variation with burnup, had to be included in the computational tools.

The design code CEPAK was developed primarily for conventional poison controlled light water reactors. As a result, several modifications were necessary to extend its capabilities to include spectral shift controlled reactors. The major changes to the CEPAK lattice cell code are as follows:

Cross Sections and Depletion Chains — Libraries updated to include ENDF/B-IV cross sections, including deuterium, and fission product yields and fission energies.

Operational Changes — Input modified to accept D_2O concentrations as a function of burnup and to alter moderator compositions accordingly.

Resonance Absorption Treatment — Dancoff factor modified to include deuterium interactions and input self-shielding factors updated to reflect harder neutron spectrum of SSCR.

Since D_2O concentration strongly affects the neutron spectrum, it was necessary to formulate cross sections as functions of both fuel exposure and deuterium concentration for the multi-dimensional SSCR calculations. The method adopted to represent the dependence of the few group microscopic cross sections on both fuel exposure and D_2O concentration was the multi-dimensional interpolating tables in the Harmony cross section formalism.[27] Cross sections are represented in a matrix where the first dimension is the burnup and the second dimension is the D_2O concentration. The main diagonal of the table defines the most probable combination of these two variables whereas the off-diagonal elements define less likely occurrences.

To assess the feasibility and consequences of employing spectral shift control in current design PWRs, detailed reactor core calculations

were necessary. A coarse mesh PDQ core model was constructed in which the fuel assembly was homogenized in a 4 × 4 node array. A coarse mesh model was utilized because of the large number of spatial depletion calculations required and the survey nature of these calculations. The 4 × 4 node array consisted of uneven spacings of 2, 6, 6, and 2 cell pitches. This arrangement has been shown to more accurately reproduce the intra-assembly flux and power distributions than an evenly spaced coarse mesh representation. Each fuel assembly was explicitly modeled in the core along with the shroud and reflector. It has been found that this model adequately predicts core reactivity, nuclide concentrations, and power peaking as compared to more detailed representations, while significantly reducing the computer time required to perform the calculations.

The number of cycles analyzed with the two-dimensional core model depended on the fuel cycle being analyzed. In general, spatial calculations were performed until the D_2O rundown and interbatch leakages became relatively constant as a function of cycle number. This insured that approximately correct neutron balances were maintained during the depletion calculations. It was important to separate the D_2O reactivity effect from the leakage reactivity effect because leakage represents a loss of neutrons from the system while changes in D_2O concentration adjust the capture in fertile material and hence the amount of fissile material bred. Thus, an accurate knowledge of either the neutron leakage or of the evolution of D_2O concentration with depletion is necessary in order to perform accurate point reactor calculations for the SSCR.

Once representative operating histories were obtained from the early cycle spatial calculations, point reactor calculations were performed to obtain mass flow data for 30 years of operation. The lattice cell code CEPAK was the primary analytical tool used to perform these fuel cycle analyses. In CEPAK, a single enrichment fuel batch is analyzed using the appropriate cycle length and batch discharge exposure to attain the specified lifetime. To simulate spectral shift control, the heavy water concentration is varied from about 60 wt % at the beginning of cycle to 2 wt % at the end of cycle (EOC) for each cycle that the fuel is resident in the core. The functional relationship between D_2O concentration and burnup (i.e., the D_2O rundown) is established through the early cycle spatial

diffusion calculations. To maintain a critical spectrum in the CEPAK depletion calculations, the buckling search option is used which adjusts the leakage to obtain a unity eigenvalue.

3. REACTOR MASS FLOW DATA

This section shall present charge and discharge mass flow data for all reactor fuel cycles presented in Table 3 of the previous section. Introductory comments are provided so that the reader may easily understand information contained in the succeeding tables.

3.1 Data Base Terminology

The following paragraphs describe the methodology used in naming the reactors and fuel cycles studied in the NASAP program. Abbreviations used in the following tables have been presented in Table 1 of Sect. 1.

All NASAP fuel cycles are described with a four-part descriptor. The descriptor has the form: reactor type — fuel isotopics — fuel cycle management description — physical fuel design characteristics. Reactor types have been discussed previously. However, each of the other segments will be discussed in subsequent paragraphs.

The fuel isotopics segment describes which fissile and fertile components are present in the fuel. If fissile uranium isotopes are present in the fuel, then the level of fissile concentration will be specified according to the categories listed in Table 2, Sect. 1. The fuel isotopics segment has the format

> Concentration of fissile U, fissile isotope(s) [fertile isotope(s)]/Axial blanket material (if present)/Radial blanket material (if present)

If an internal blanket is present, its description will be given in a footnote. Concentration of fissile U is defined as the ratio of the sum of U-233 and U-235 to total uranium.

The fuel cycle management segment of the fuel cycle descriptor contains a list of abbreviations which describes fuel management options and fuel processing options. No specification is listed if the fuel cycle is a once through fuel cycle and if the discharge exposure is unique to the fuel cycle. Several PWR fuel cycles have been examined for two levels of discharge exposure (30,000 MWD/MT and 50,000 MWD/MT). Those fuel cycles with extended exposure will be designated with an X.

Some reactors, such as PWRs and ALWRs, can be loaded with nuclear fuels which differ in their mechanical or chemical forms but which have the same isotopic content. If some fuel cycles are distinguished solely by differences in the physical characteristics of the fuel or fuel element design, then a physical fuel design descriptor is provided.

To show how a fuel cycle descriptor would be created, consider the following example. A writer wishes to prepare an entry in a table for a homogeneous gas-cooled fast reactor which has 12% U-233 in U core fuel and thorium in the radial and axial blanket. The fissile uranium is recycled but the plutonium is stored. The fuel is a carbide composition. The fuel cycle descriptor would be

GCFR — ME U3(U)/Th/Th — RUF, HM — C .

3.2 Data Base Summary Sheets

A summary table is provided for each reactor fuel cycle. The values presented in the tables are calculated directly from the mass flow data. No losses are included in the tabulated information. Some sources did not provide initial core or final core data. In those cases, asterisks (****) have been placed in the corresponding table positions. In those fuel cycles which assumed recycle of a fissile material, a 2 year lag time between discharge and reinsertion of the material into the reactor was assumed.

Mass flow data for several converter reactor fuel cycles which require recycle of the discharged fuel are provided in this data base. Since the conversion ratio of these reactors is less than 1, additional fresh fuel or makeup fuel must be supplied at each reloading interval. Hence several of the converter cycles have two sets of mass flow data — one for the makeup fuel and one for the fuel which is recycled. It should be noted that recycle mass flows may, in reality, be the sum of recycled fuel and fresh fuel which is added to raise the fissile content to a required value determined by the fuel cycle length. The total core loading in any given year is the sum of the makeup and recycle mass flow data.

Fuel cycles in breeder reactors usually show blanket fuel elements and core fuel elements residing in the reactor for different lengths of time. Thus, the breeder fuel cycles report mass flow data for the blankets separately from the core mass flow data. The total fuel loading to a breeder reactor in any given year is the sum of the blanket and core loadings.

Allowing for common practice, the U_3O_8 and ThO_2 requirements are reported in short tons (2000 lbs) per gigawatt electric instead of the standard S.I. units. U_3O_8 and separative work requirements (SWU) were calculated assuming a U-235 content in the uranium feed of 0.711% and a U-235 content in the tails of 0.200%. In those fuel cycles where U-233 was present, no attempt was made to calculate an equivalent U_3O_8 or separative work requirement. Asterisks (****) appear in those catagories in the summary sheets for U-233 cycles. The neutron poisoning effect of U-236 was not taken into account when calculating the worth of the discharged fuel.

Various fuel management parameters are presented in the summary tables. These include the number of batches in the core, refueling interval, power level, capacity factor, fuel discharge exposure, thermal efficiency and the year which is defined as the equilibrium cycle. If not specified, the batch loaded in year 21 is defined as the equilibrium cycle.

Usually only a portion of a reactor core is replaced at each refueling interval. If so, the reactor core contains several batches of fuel, only one of which is removed at each refueling outage. Both the number of batches and the refueling interval are provided for each fuel cycle.

The power level provided in the summary table refers to the rated electrical output. However, the fuel exposure level at discharge (burnup) is reported in megawatt (thermal) days per metric tonne (1000 kg) heavy metal.

The capacity factor is defined as the ratio of the time that the reactor is operating at full rated power to calendar time. Thermal efficiency is defined as the ratio of electric power generated to thermal power released in the core.

ALWR-1
HEU3,U5(TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	205.3	202.8
FINAL CORE	205.4	202.8
ANNUAL EQUILIBRIUM	82.3	81.2
30 YR CUMULATIVE	2468.1	2436.7
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	3055.0	3522.0
FINAL CORE	4270.0	4259.0
ANNUAL EQUILIBRIUM	1673.6	1673.6
30 YR CUMULATIVE	47518.0	48700.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	2567.0	1871.0
FINAL CORE	557.0	547.0
ANNUAL EQUILIBRIUM	225.2	210.8
30 YR CUMULATIVE	11619.0	9520.0

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	2.50
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	15300.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 17.50

ALWR-1
HEU3,U5(TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	163860.0	0.0	0.0	3055.0	648.0	2567.0	1179.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171309.0	0.0
2.50	164190.0	0.0	0.0	3431.0	742.0	1823.0	1243.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171429.0	0.0
5.00	164290.0	0.0	0.0	3693.0	852.0	1328.0	1272.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171435.0	0.0
7.50	164320.0	0.0	0.0	3879.0	970.0	1005.0	1277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171451.0	0.0
10.00	164300.0	0.0	0.0	4016.0	1091.0	809.0	1270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171486.0	0.0
12.50	164210.0	0.0	0.0	4106.0	1206.0	688.0	1250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171460.0	0.0
15.00	164200.0	0.0	0.0	4155.0	1312.0	608.0	1220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171495.0	0.0
17.50	164160.0	0.0	0.0	4184.0	1410.0	563.0	1187.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171504.0	0.0
20.00	164080.0	0.0	0.0	4214.0	1504.0	553.0	1158.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171509.0	0.0
22.50	163980.0	0.0	0.0	4254.0	1593.0	565.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171528.0	0.0
25.00	163960.0	0.0	0.0	4261.0	1669.0	553.0	1104.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171547.0	0.0
27.50	163900.0	0.0	0.0	4270.0	1739.0	557.0	1076.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171542.0	0.0

ALWR-1
HEU3,U5(TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
2.50	161810.0	113.0	0.0	3409.0	762.0	1871.0	1276.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169241.0	2050.0
5.00	162110.0	114.0	0.0	3626.0	862.0	1345.0	1288.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169345.0	2050.0
7.50	162190.0	115.0	0.0	3776.0	973.0	1008.0	1281.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169343.0	2050.0
10.00	162220.0	116.0	0.0	3883.0	1087.0	794.0	1263.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169363.0	2050.0
12.50	162190.0	116.0	0.0	3970.0	1201.0	671.0	1242.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169390.0	2050.0
15.00	162110.0	116.0	0.0	4027.0	1309.0	597.0	1215.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169374.0	2050.0
17.50	162100.0	116.0	0.0	4053.0	1407.0	550.0	1181.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169407.0	2050.0
20.00	162050.0	116.0	0.0	4068.0	1498.0	527.0	1146.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169405.0	2050.0
22.50	161980.0	116.0	0.0	4093.0	1584.0	527.0	1119.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169419.0	2050.0
25.00	161980.0	115.0	0.0	4133.0	1666.0	543.0	1099.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169536.0	2050.0
27.50	161860.0	115.0	0.0	4135.0	1735.0	540.0	1068.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169453.0	2050.0
30.00	161810.0	115.0	0.0	4144.0	1800.0	547.0	1149.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169565.0	2050.0

ALWR-2
HEU5,U3(TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	153.5	151.1
FINAL CORE	153.8	151.2
ANNUAL EQUILIBRIUM	61.5	60.5
30 YR CUMULATIVE	1845.7	1814.6
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	959.5	490.9
FINAL CORE	247.1	125.0
ANNUAL EQUILIBRIUM	98.8	50.0
30 YR CUMULATIVE	3897.8	1968.4
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	982.2	487.2
FINAL CORE	242.2	120.5
ANNUAL EQUILIBRIUM	96.9	48.2
30 YR CUMULATIVE	3868.0	1915.1
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	1278.0
FINAL CORE	1831.0	2033.0
ANNUAL EQUILIBRIUM	732.4	813.2
30 YR CUMULATIVE	19528.0	23387.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	3783.0	1936.0
FINAL CORE	975.0	494.0
ANNUAL EQUILIBRIUM	390.0	197.6
30 YR CUMULATIVE	15378.0	7773.0

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	2.50
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	20000.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 17.50

ALWR-2
HEU5,U3(TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	122520.0	0.0	0.0	0.0	0.0	3783.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	126304.0	0.0
2.50	122600.0	0.0	0.0	1218.0	84.0	1845.0	324.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	126272.0	0.0
5.00	122750.0	0.0	0.0	1831.0	232.0	975.0	489.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	126278.0	0.0

ALWR-2
HEU5,U3(TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
2.50	120590.0	107.0	0.0	1171.0	88.0	1936.0	340.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	124233.0	2050.0
5.00	120760.0	111.0	0.0	1668.0	228.0	897.0	476.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	124141.0	2050.0
7.50	120660.0	113.0	0.0	1920.0	377.0	494.0	544.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	124109.0	2050.0

ALWR-3
HEU3,U5(TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	207.0	204.3
FINAL CORE	205.8	203.2
ANNUAL EQUILIBRIUM	82.5	81.4
30 YR CUMULATIVE	2476.4	2444.3
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	3713.0	3843.0
FINAL CORE	4234.0	4223.0
ANNUAL EQUILIBRIUM	1674.4	1669.2
30 YR CUMULATIVE	49065.0	49240.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	903.0	692.0
FINAL CORE	512.0	520.0
ANNUAL EQUILIBRIUM	186.0	187.2
30 YR CUMULATIVE	6518.0	6052.0

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	2.50
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	15300.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 17.50

ALWR-3
HEU3,U5(TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	165210.0	0.0	0.0	3713.0	688.0	903.0	994.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171508.0	0.0
2.50	165110.0	0.0	0.0	3868.0	838.0	698.0	995.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171509.0	0.0
5.00	165010.0	0.0	0.0	3974.0	978.0	576.0	983.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171521.0	0.0
7.50	164900.0	0.0	0.0	4047.0	1109.0	509.0	964.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171529.0	0.0
10.00	164790.0	0.0	0.0	4099.0	1229.0	474.0	942.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171534.0	0.0
12.50	164690.0	0.0	0.0	4137.0	1339.0	460.0	919.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171545.0	0.0
15.00	164590.0	0.0	0.0	4165.0	1439.0	459.0	896.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171549.0	0.0
17.50	164500.0	0.0	0.0	4186.0	1530.0	465.0	873.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171554.0	0.0
20.00	164420.0	0.0	0.0	4202.0	1613.0	475.0	852.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171562.0	0.0
22.50	164340.0	0.0	0.0	4215.0	1688.0	487.0	832.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171562.0	0.0
25.00	164270.0	0.0	0.0	4225.0	1756.0	500.0	814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171565.0	0.0
27.50	164210.0	0.0	0.0	4234.0	1818.0	512.0	797.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171571.0	0.0

ALWR-3
HEU3,U5(TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
2.50	163050.0	120.0	0.0	3723.0	833.0	692.0	988.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169406.0	2050.0
5.00	162960.0	119.0	0.0	3821.0	972.0	568.0	974.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169414.0	2050.0
7.50	162860.0	119.0	0.0	3891.0	1102.0	499.0	954.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169425.0	2050.0
10.00	162750.0	119.0	0.0	3942.0	1222.0	465.0	932.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169430.0	2050.0
12.50	162650.0	118.0	0.0	3982.0	1332.0	451.0	909.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169442.0	2050.0
15.00	162550.0	118.0	0.0	4012.0	1433.0	451.0	886.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169450.0	2050.0
17.50	162460.0	118.0	0.0	4038.0	1524.0	457.0	865.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169462.0	2050.0
20.00	162380.0	118.0	0.0	4055.0	1608.0	468.0	844.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169473.0	2050.0
22.50	162300.0	117.0	0.0	4072.0	1683.0	480.0	825.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169477.0	2050.0
25.00	162230.0	117.0	0.0	4085.0	1752.0	494.0	808.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169486.0	2050.0
27.50	162170.0	117.0	0.0	4096.0	1814.0	507.0	791.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169495.0	2050.0
30.00	162110.0	117.0	0.0	4106.0	1871.0	520.0	777.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169501.0	2050.0

ALWR-4
HEU3(TH),RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	387.1	389.8
FINAL CORE	390.6	129.1
ANNUAL EQUILIBRIUM	130.3	129.1
30 YR CUMULATIVE	4167.9	3879.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	4287.8	4413.8
FINAL CORE	4554.4	1549.5
ANNUAL EQUILIBRIUM	1513.6	1549.5
30 YR CUMULATIVE	47604.4	45617.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	58.0	124.1
FINAL CORE	293.5	112.6
ANNUAL EQUILIBRIUM	91.3	112.6
30 YR CUMULATIVE	2230.3	2562.3

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.035
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	10100.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

ALWR-4
HEU3(TH),RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	319730.0	0.0	18.2	4437.9	422.4	60.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	324672.8	0.0
1.00	107934.3	0.0	6.2	1498.2	142.6	20.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109602.9	0.0
2.00	107934.3	0.0	6.2	1498.2	142.6	20.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109602.9	0.0
3.00	107901.1	0.0	6.1	1502.2	159.9	31.4	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109603.1	0.0
4.00	107868.1	0.0	6.0	1506.1	177.1	42.6	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109603.4	0.0
5.00	107835.4	0.0	6.0	1510.1	194.3	53.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.0	0.0
6.00	107835.4	0.0	6.0	1510.1	194.3	53.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.0	0.0
7.00	107835.4	0.0	6.0	1510.1	194.3	53.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.0	0.0
8.00	107796.6	0.0	5.9	1518.9	218.0	59.4	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.2	0.0
9.00	107757.8	0.0	5.8	1527.9	241.9	65.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.4	0.0
10.00	107719.0	0.0	5.7	1536.8	265.9	70.6	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.8	0.0
11.00	107719.0	0.0	5.7	1536.8	265.9	70.6	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.8	0.0
12.00	107719.0	0.0	5.7	1536.8	265.9	70.6	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109604.8	0.0
13.00	107680.3	0.0	5.6	1545.5	290.0	76.3	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109605.1	0.0
14.00	107641.7	0.0	5.6	1554.1	314.0	81.9	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109605.4	0.0
15.00	107604.5	0.0	5.5	1561.9	337.2	87.8	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109605.9	0.0
16.00	107604.5	0.0	5.5	1561.9	337.2	87.8	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109605.9	0.0
17.00	107604.5	0.0	5.5	1561.9	337.2	87.8	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109605.9	0.0
18.00	107572.8	0.0	5.4	1566.6	356.3	94.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.0	0.0
19.00	107541.1	0.0	5.3	1571.3	375.3	101.3	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.1	0.0
20.00	107509.8	0.0	5.3	1575.9	394.1	108.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.6	0.0
21.00	107572.8	0.0	5.4	1566.6	356.3	94.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.0	0.0
22.00	107541.1	0.0	5.3	1571.3	375.3	101.3	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.1	0.0
23.00	107509.8	0.0	5.3	1575.9	394.1	108.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.6	0.0
24.00	107572.8	0.0	5.4	1566.6	356.3	94.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.0	0.0
25.00	107541.1	0.0	5.3	1571.3	375.3	101.3	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.1	0.0
26.00	107509.8	0.0	5.3	1575.9	394.1	108.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.6	0.0
27.00	107572.8	0.0	5.4	1566.6	356.3	94.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.0	0.0
28.00	107541.1	0.0	5.3	1571.3	375.3	101.3	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.1	0.0
29.00	107509.8	0.0	5.3	1575.9	394.1	108.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109606.6	0.0

ALWR-4
HEU3(TH),RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	107604.8	37.8	6.2	1480.0	161.6	31.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109324.6	279.9
2.00	107294.1	37.6	6.1	1488.2	179.1	42.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109051.5	554.5
3.00	106993.7	37.4	6.0	1487.3	195.5	53.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108778.3	829.1
4.00	106993.7	37.4	6.0	1487.4	195.9	53.9	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108778.9	829.1
5.00	106992.4	37.4	6.0	1487.5	196.2	54.1	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108778.3	829.1
6.00	106952.9	37.3	5.9	1496.9	220.2	60.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108778.6	829.2
7.00	106914.1	37.1	5.9	1506.2	244.0	65.6	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108778.9	829.2
8.00	106875.4	37.0	5.8	1515.3	267.8	71.2	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108779.2	829.3
9.00	106874.6	37.0	5.8	1515.5	268.2	71.3	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108779.3	829.3
10.00	106873.9	37.0	5.8	1515.7	268.7	71.4	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108779.4	829.3
11.00	106834.6	36.9	5.7	1524.8	293.0	77.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108779.6	829.3
12.00	106796.1	36.8	5.6	1533.6	316.9	82.7	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108779.9	829.3
13.00	106758.4	36.7	5.5	1542.0	340.0	88.5	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.3	829.3
14.00	106757.7	36.7	5.5	1542.1	340.4	88.6	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.1	829.3
15.00	106756.9	36.7	5.5	1542.3	340.9	88.7	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.1	829.3
16.00	106721.7	36.6	5.5	1549.7	360.7	95.7	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.6	829.4
17.00	106687.1	36.5	5.4	1556.8	380.2	102.6	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.7	829.4
18.00	106653.7	36.4	5.3	1563.2	399.3	109.4	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.9	829.4
19.00	106653.1	36.4	5.3	1563.3	399.7	109.5	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.9	829.4
20.00	106652.5	36.4	5.3	1563.4	400.0	109.7	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.1	829.4
21.00	106624.0	36.3	5.3	1567.4	415.8	116.5	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.3	829.4
22.00	106653.1	36.4	5.3	1563.3	399.7	109.5	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.9	829.4
23.00	106652.5	36.4	5.3	1563.4	400.0	109.7	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.1	829.4
24.00	106624.0	36.3	5.3	1567.4	415.8	116.5	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.3	829.4
25.00	106653.1	36.4	5.3	1563.3	399.7	109.5	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.9	829.4
26.00	106652.5	36.4	5.3	1563.4	400.0	109.7	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.1	829.4
27.00	106624.0	36.3	5.3	1567.4	415.8	116.5	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.3	829.4
28.00	106653.1	36.4	5.3	1563.3	399.7	109.5	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108780.9	829.4
29.00	106652.5	36.4	5.3	1563.4	400.0	109.7	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.1	829.4
30.00	106624.0	36.3	5.3	1567.4	415.8	116.5	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108781.3	829.4

ALWR-5
MEU5,U3(U,TH)-D,RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	146.2	146.3
FINAL CORE	147.8	144.7
ANNUAL EQUILIBRIUM	49.3	48.5
30 YR CUMULATIVE	1574.8	1552.8
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	913.7	518.6
FINAL CORE	1141.7	723.1
ANNUAL EQUILIBRIUM	380.3	167.8
30 YR CUMULATIVE	11898.9	5593.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	830.6	448.8
FINAL CORE	1037.9	634.3
ANNUAL EQUILIBRIUM	345.7	141.3
30 YR CUMULATIVE	10817.2	4745.7
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	271.3
FINAL CORE	0.0	304.0
ANNUAL EQUILIBRIUM	0.0	131.2
30 YR CUMULATIVE	0.0	3988.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	321.5
FINAL CORE	0.0	358.7
ANNUAL EQUILIBRIUM	0.0	158.8
30 YR CUMULATIVE	0.0	4812.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	797.2
FINAL CORE	0.0	773.4
ANNUAL EQUILIBRIUM	0.0	345.3
30 YR CUMULATIVE	0.0	10549.1
URANIUM-235 (KG/GWE)		
INITIAL CORE	3631.7	2073.8
FINAL CORE	4537.5	2886.3
ANNUAL EQUILIBRIUM	1511.5	673.3
30 YR CUMULATIVE	47291.6	22419.1

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.295
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	26600.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

ALWR-5
MEU5,U3(U,TH)-D,RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	151030.6	0.0	0.0	0.0	0.0	4703.0	0.0	18840.5	0.0	0.0	0.0	0.0	0.0	0.0	174574.1	0.0
1.00	50905.8	0.0	0.0	0.0	0.0	1913.4	0.0	7653.5	0.0	0.0	0.0	0.0	0.0	0.0	60472.7	0.0
2.00	50905.8	0.0	0.0	0.0	0.0	1913.4	0.0	7653.5	0.0	0.0	0.0	0.0	0.0	0.0	60472.7	0.0
3.00	50905.8	0.0	0.0	0.0	0.0	1921.7	52.1	7634.8	0.0	0.0	0.0	0.0	0.0	0.0	60514.4	0.0
4.00	50905.8	0.0	0.0	0.0	0.0	1926.7	82.9	7623.8	0.0	0.0	0.0	0.0	0.0	0.0	60539.2	0.0
5.00	50905.8	0.0	0.0	0.0	0.0	1939.6	163.5	7594.7	0.0	0.0	0.0	0.0	0.0	0.0	60603.6	0.0
6.00	50905.8	0.0	0.0	0.0	0.0	1939.6	163.5	7594.7	0.0	0.0	0.0	0.0	0.0	0.0	60603.6	0.0
7.00	50905.8	0.0	0.0	0.0	0.0	1939.6	163.5	7594.7	0.0	0.0	0.0	0.0	0.0	0.0	60603.6	0.0
8.00	50905.8	0.0	0.0	0.0	0.0	1945.2	199.0	7582.0	0.0	0.0	0.0	0.0	0.0	0.0	60632.0	0.0
9.00	50905.8	0.0	0.0	0.0	0.0	1948.6	219.9	7574.4	0.0	0.0	0.0	0.0	0.0	0.0	60648.7	0.0
10.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
11.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
12.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
13.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
14.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
15.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
16.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
17.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
18.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
19.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
20.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
21.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
22.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
23.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
24.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
25.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
26.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
27.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
28.00	50905.8	0.0	0.0	0.0	0.0	1957.4	274.7	7554.7	0.0	0.0	0.0	0.0	0.0	0.0	60692.6	0.0
29.00	50905.8	0.0	0.0	0.0	0.0	1961.2	298.9	7546.0	0.0	0.0	0.0	0.0	0.0	0.0	60711.9	0.0

ALWR-5
MEU5,U3(U,TH)-D,RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	50624.8	34.6	0.9	192.0	10.9	938.1	65.1	4924.0	0.0	57.5	7.3	3.1	0.2	0.0	56858.5	380.0
2.00	50387.4	34.2	1.7	324.4	26.2	911.6	136.4	6167.4	0.0	103.6	19.6	15.4	1.7	0.0	58129.6	745.0
3.00	50150.9	34.2	2.4	413.0	43.5	835.9	204.4	7241.2	0.0	138.6	30.5	33.1	5.7	0.0	59133.4	1115.0
4.00	50150.9	34.2	2.4	413.0	43.5	835.9	204.4	7241.2	0.0	138.6	30.5	33.1	5.7	0.0	59133.4	1115.0
5.00	50150.9	34.2	2.4	413.0	43.5	835.9	204.4	7241.2	0.0	138.6	30.5	33.1	5.7	0.0	59133.4	1115.0
6.00	50150.9	34.2	2.4	413.0	43.5	844.2	248.7	7223.5	0.0	138.3	30.4	33.0	5.7	0.0	59167.8	1115.0
7.00	50150.9	34.2	2.4	413.0	43.5	849.2	274.9	7213.1	0.0	138.1	30.4	33.0	5.7	0.0	59188.4	1115.0
8.00	50150.9	34.2	2.4	413.0	43.5	862.1	343.4	7185.6	0.0	137.5	30.3	32.8	5.7	0.0	59241.4	1115.0
9.00	50150.9	34.2	2.4	413.0	43.5	862.1	343.4	7185.6	0.0	137.5	30.3	32.8	5.7	0.0	59241.4	1115.0
10.00	50150.9	34.2	2.4	413.0	43.5	862.1	343.4	7185.6	0.0	137.5	30.3	32.8	5.7	0.0	59241.4	1115.0
11.00	50150.9	34.2	2.4	413.0	43.5	867.7	373.6	7173.6	0.0	137.3	30.2	32.8	5.6	0.0	59264.8	1115.0
12.00	50150.9	34.2	2.4	413.0	43.5	871.9	391.3	7166.4	0.0	137.1	30.2	32.8	5.6	0.0	59279.3	1115.0
13.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
14.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
15.00	50150.9	34.2	2.4	413.0	43.5	871.9	391.3	7166.4	0.0	137.1	30.2	32.8	5.6	0.0	59279.3	1115.0
16.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
17.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
18.00	50150.9	34.2	2.4	413.0	43.5	871.9	391.3	7166.4	0.0	137.1	30.2	32.8	5.6	0.0	59279.3	1115.0
19.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
20.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
21.00	50150.9	34.2	2.4	413.0	43.5	871.9	391.3	7166.4	0.0	137.1	30.2	32.8	5.6	0.0	59279.3	1115.0
22.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
23.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
24.00	50150.9	34.2	2.4	413.0	43.5	871.9	391.3	7166.4	0.0	137.1	30.2	32.8	5.6	0.0	59279.3	1115.0
25.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
26.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
27.00	50150.9	34.2	2.4	413.0	43.5	871.9	391.3	7166.4	0.0	137.1	30.2	32.8	5.6	0.0	59279.3	1115.0
28.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
29.00	50150.9	34.2	2.4	413.0	43.5	879.9	437.9	7147.8	0.0	136.8	30.1	32.7	5.6	0.0	59314.8	1115.0
30.00	149521.2	102.2	4.1	899.3	78.9	3737.7	1168.1	21582.5	0.0	339.0	63.1	54.7	7.7	0.0	177558.3	1115.0

ALWR-6
HEU3,U5(TH)-RUF,FS

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	186.5	188.6
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	126.1	125.0
30 YR CUMULATIVE	3908.8	3754.2
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	1974.8	1970.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	1330.8	1282.5
30 YR CUMULATIVE	41290.2	38560.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	2.0	50.2
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	91.4	99.0
30 YR CUMULATIVE	2166.5	2494.1

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	0.50
POWER (GWE)	1.295
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	11300.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.50

ALWR-6
HEU3,U5(TH)-RUF,FS
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	192709.0	0.0	10.5	2557.3	34.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	195313.9	0.0
0.50	65353.5	0.0	3.6	867.3	82.6	11.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66319.5	0.0
1.00	65353.5	0.0	3.6	867.3	82.6	11.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66319.5	0.0
1.50	65353.5	0.0	3.6	867.3	82.6	11.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66319.5	0.0
2.00	65353.5	0.0	3.6	867.3	82.6	11.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66319.5	0.0
2.50	65331.4	0.0	3.6	865.9	100.2	17.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66319.6	0.0
3.00	65309.5	0.0	3.7	864.5	117.8	22.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66319.9	0.0
3.50	65287.7	0.0	3.7	863.1	135.2	27.4	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.0	0.0
4.00	65287.7	0.0	3.7	863.1	135.2	27.4	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.0	0.0
4.50	65287.7	0.0	3.7	863.1	135.2	27.4	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.0	0.0
5.00	65287.7	0.0	3.7	863.1	135.2	27.4	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.0	0.0
5.50	65287.7	0.0	3.7	863.1	135.2	27.4	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.0	0.0
6.00	65269.1	0.0	3.6	863.5	149.8	30.8	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.2	0.0
6.50	65250.5	0.0	3.5	864.0	164.3	34.2	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.3	0.0
7.00	65232.1	0.0	3.4	864.4	178.8	37.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.5	0.0
7.50	65232.1	0.0	3.4	864.4	178.8	37.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.5	0.0
8.00	65232.1	0.0	3.4	864.4	178.8	37.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.5	0.0
8.50	65232.1	0.0	3.4	864.4	178.8	37.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.5	0.0
9.00	65232.1	0.0	3.4	864.4	178.8	37.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.5	0.0
9.50	65213.7	0.0	3.3	864.8	193.3	40.9	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.8	0.0
10.00	65198.0	0.0	3.3	864.6	205.2	44.4	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.0	0.0
10.50	65183.9	0.0	3.2	863.9	215.5	48.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.0	0.0
11.00	65183.9	0.0	3.2	863.8	215.5	48.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66320.9	0.0
11.50	65183.9	0.0	3.2	863.9	215.5	48.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.0	0.0
12.00	65183.9	0.0	3.2	863.9	215.5	48.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.0	0.0
12.50	65183.9	0.0	3.2	863.9	215.5	48.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.0	0.0
13.00	65170.1	0.0	3.1	863.2	225.6	51.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.1	0.0
13.50	65157.5	0.0	3.0	862.6	233.9	55.5	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.3	0.0
14.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
14.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
15.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
15.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
16.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
16.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
17.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
17.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
18.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
18.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
19.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
19.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
20.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
20.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
21.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
21.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
22.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
22.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
23.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
23.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
24.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0

24.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
25.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
25.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
26.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
26.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
27.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
27.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
28.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
28.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
29.00	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0
29.50	65145.2	0.0	3.0	861.7	242.2	59.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66321.5	0.0

ALWR-6
HEU3,U5(TH)-RUF,PS
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.50	65143.6	55.1	3.6	810.4	100.2	17.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66131.4	189.0
1.00	64952.1	55.2	3.6	797.6	115.7	21.8	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65948.1	373.2
1.50	64769.9	55.6	3.6	777.3	129.5	26.2	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65764.8	557.4
2.00	64769.9	55.6	3.6	777.3	129.5	26.2	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65764.8	557.4
2.50	64769.9	55.6	3.6	777.3	129.5	26.2	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65764.8	557.4
3.00	64769.3	55.6	3.6	777.3	130.0	26.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65764.9	557.4
3.50	64768.8	55.6	3.6	777.2	130.4	26.5	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65764.9	557.4
4.00	64750.9	55.4	3.5	777.7	144.5	29.7	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65764.9	557.5
4.50	64733.6	55.3	3.4	778.1	158.2	32.9	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.2	557.5
5.00	64716.3	55.2	3.3	778.5	171.8	36.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.2	557.5
5.50	64716.3	55.2	3.3	778.5	171.8	36.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.2	557.5
6.00	64716.3	55.2	3.3	778.5	171.8	36.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.2	557.5
6.50	64715.8	55.2	3.3	778.6	172.1	36.1	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.2	557.5
7.00	64715.4	55.2	3.3	778.6	172.5	36.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.3	557.5
7.50	64697.1	55.0	3.2	779.0	186.4	39.4	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65764.8	557.5
8.00	64682.6	54.9	3.1	779.2	197.7	42.8	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.6	557.5
8.50	64668.7	54.8	3.1	779.2	207.5	46.3	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.7	557.5
9.00	64668.7	54.8	3.1	779.2	207.5	46.3	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.7	557.5
9.50	64668.7	54.8	3.1	779.2	207.5	46.3	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.7	557.5
10.00	64668.3	54.8	3.1	779.2	207.8	46.4	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.8	557.5
10.50	64667.9	54.8	3.1	779.2	208.1	46.5	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.8	557.6
11.00	64653.9	54.7	3.0	779.2	217.9	50.1	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.9	557.6
11.50	64642.0	54.6	2.9	778.6	225.8	53.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.9	557.6
12.00	64630.6	54.5	2.9	777.8	233.5	57.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.1	557.6
12.50	64630.6	54.5	2.9	777.8	233.5	57.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.1	557.6
13.00	64630.6	54.5	2.9	777.8	233.5	57.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.1	557.6
13.50	64630.3	54.5	2.9	777.8	233.7	57.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.1	557.6
14.00	64630.0	54.5	2.9	777.8	233.9	57.2	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.6
14.50	64618.0	54.4	2.8	776.9	241.8	60.7	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65765.8	557.6
15.00	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
15.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
16.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
16.50	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
17.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
17.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
18.00	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
18.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
19.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
19.50	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
20.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
20.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
21.00	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
21.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
22.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
22.50	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
23.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
23.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
24.00	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
24.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7

25.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
25.50	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
26.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
26.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
27.00	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
27.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
28.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
28.50	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6
29.00	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
29.50	64596.1	54.2	2.7	775.1	256.9	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.3	557.7
30.00	64607.1	54.3	2.8	776.1	249.4	64.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65766.4	557.6

ALWR-7
MEU5,U3(U,TH)-RU5

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	292.2	289.7
FINAL CORE	292.2	290.5
ANNUAL EQUILIBRIUM	97.4	96.6
30 YR CUMULATIVE	2921.8	2897.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	1531.4	980.8
FINAL CORE	1560.1	1200.1
ANNUAL EQUILIBRIUM	518.0	334.4
30 YR CUMULATIVE	15481.8	10166.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	1392.2	858.7
FINAL CORE	1418.3	1068.7
ANNUAL EQUILIBRIUM	470.9	293.1
30 YR CUMULATIVE	14074.5	8925.3
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	245.9
FINAL CORE	0.0	142.3
ANNUAL EQUILIBRIUM	0.0	81.3
30 YR CUMULATIVE	0.0	2342.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	292.1
FINAL CORE	0.0	168.9
ANNUAL EQUILIBRIUM	0.0	96.5
30 YR CUMULATIVE	0.0	2782.2
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	1311.4
FINAL CORE	0.0	913.9
ANNUAL EQUILIBRIUM	0.0	437.1
30 YR CUMULATIVE	0.0	12716.2
URANIUM-235 (KG/GWE)		
INITIAL CORE	6086.4	3915.4
FINAL CORE	6200.4	4781.1
ANNUAL EQUILIBRIUM	2058.6	1335.0
30 YR CUMULATIVE	61531.9	40573.5

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	3.00
POWER (GWE)	0.721
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	11200.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 18.00

ALWR-7
MEU5,U3(U,TH)-RU5
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	168100.0	0.0	0.0	0.0	0.0	4388.3	0.0	17553.2	0.0	0.0	0.0	0.0	0.0	0.0	190041.4	0.0
3.00	168100.0	0.0	0.0	0.0	0.0	4388.3	0.0	17553.2	0.0	0.0	0.0	0.0	0.0	0.0	190041.4	0.0
6.00	168100.0	0.0	0.0	0.0	0.0	4426.7	239.9	17466.9	0.0	0.0	0.0	0.0	0.0	0.0	190233.4	0.0
9.00	168100.0	0.0	0.0	0.0	0.0	4426.7	239.9	17466.9	0.0	0.0	0.0	0.0	0.0	0.0	190233.4	0.0
12.00	168100.0	0.0	0.0	0.0	0.0	4452.8	403.0	17408.2	0.0	0.0	0.0	0.0	0.0	0.0	190363.9	0.0
15.00	168100.0	0.0	0.0	0.0	0.0	4452.8	403.0	17408.2	0.0	0.0	0.0	0.0	0.0	0.0	190363.9	0.0
18.00	168100.0	0.0	0.0	0.0	0.0	4452.8	403.0	17408.2	0.0	0.0	0.0	0.0	0.0	0.0	190363.9	0.0
21.00	168100.0	0.0	0.0	0.0	0.0	4452.8	403.0	17408.2	0.0	0.0	0.0	0.0	0.0	0.0	190363.9	0.0
24.00	168100.0	0.0	0.0	0.0	0.0	4452.8	403.0	17408.2	0.0	0.0	0.0	0.0	0.0	0.0	190363.9	0.0
27.00	168100.0	0.0	0.0	0.0	0.0	4470.5	513.6	17368.4	0.0	0.0	0.0	0.0	0.0	0.0	190452.4	0.0

ALWR-7
MEU5,U3(U,TH)-RU5
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
3.00	166654.0	75.8	2.6	869.7	68.6	2823.0	299.9	17206.1	0.0	156.7	31.0	20.6	2.3	0.0	188210.0	1800.0
6.00	166654.0	75.8	2.6	869.7	68.6	2823.0	299.9	17206.1	0.0	156.7	31.0	20.6	2.3	0.0	188210.0	1800.0
9.00	166654.0	75.8	2.6	869.7	68.6	2861.4	503.8	17121.5	0.0	155.9	30.8	20.5	2.3	0.0	188366.6	1800.0
12.00	166654.0	75.8	2.6	869.7	68.6	2861.4	503.8	17121.5	0.0	155.9	30.8	20.5	2.3	0.0	188366.6	1800.0
15.00	166654.0	75.8	2.6	869.7	68.6	2887.5	642.0	17064.0	0.0	155.4	30.7	20.4	2.3	0.0	188472.8	1800.0
18.00	166654.0	75.8	2.6	869.7	68.6	2887.5	642.0	17064.0	0.0	155.4	30.7	20.4	2.3	0.0	188472.8	1800.0
21.00	166654.0	75.8	2.6	869.7	68.6	2887.5	642.0	17064.0	0.0	155.4	30.7	20.4	2.3	0.0	188472.8	1800.0
24.00	166654.0	75.8	2.6	869.7	68.6	2887.5	642.0	17064.0	0.0	155.4	30.7	20.4	2.3	0.0	188472.8	1800.0
27.00	166654.0	75.8	2.6	869.7	68.6	2887.5	642.0	17064.0	0.0	155.4	30.7	20.4	2.3	0.0	188472.8	1800.0
30.00	167151.5	77.4	1.5	581.5	35.1	3447.2	674.6	17190.8	0.0	90.7	17.9	11.9	1.3	0.0	189281.1	1050.0

ALWR-8
HEU3(TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	420.4	425.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	142.5	141.4
30 YR CUMULATIVE	4552.8	4242.8
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	4896.3	5049.6
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	1688.6	1713.1
30 YR CUMULATIVE	53706.0	51286.9
URANIUM-235 (KG/GWE)		
INITIAL CORE	66.2	139.9
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	69.8	75.8
30 YR CUMULATIVE	1896.1	2177.5

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	0.711
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	10100.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

ALWR-8
HEU3(TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	238496.0	0.0	14.3	3481.3	331.4	47.1	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	242373.4	0.0
1.00	80957.4	0.0	4.9	1181.7	112.5	16.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82273.6	0.0
2.00	80957.4	0.0	4.9	1181.7	112.5	16.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82273.6	0.0
3.00	80931.1	0.0	4.8	1183.8	127.5	24.6	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82273.6	0.0
4.00	80905.1	0.0	4.7	1185.9	142.4	33.1	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82273.9	0.0
5.00	80879.2	0.0	4.7	1187.9	157.3	41.6	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.3	0.0
6.00	80879.2	0.0	4.7	1187.9	157.3	41.6	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.3	0.0
7.00	80879.2	0.0	4.7	1187.9	157.3	41.6	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.3	0.0
8.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0
9.00	80824.2	0.0	4.6	1200.6	191.2	49.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.8	0.0
10.00	80796.8	0.0	4.5	1206.9	208.1	53.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.9	0.0
11.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0
12.00	80824.2	0.0	4.6	1200.6	191.2	49.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.8	0.0
13.00	80796.8	0.0	4.5	1206.9	208.1	53.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.9	0.0
14.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0
15.00	80824.2	0.0	4.6	1200.6	191.2	49.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.8	0.0
16.00	80796.8	0.0	4.5	1206.9	208.1	53.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.9	0.0
17.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0
18.00	80824.2	0.0	4.6	1200.6	191.2	49.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.8	0.0
19.00	80796.8	0.0	4.5	1206.9	208.1	53.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.9	0.0
20.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0
21.00	80824.2	0.0	4.6	1200.6	191.2	49.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.8	0.0
22.00	80796.8	0.0	4.5	1206.9	208.1	53.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.9	0.0
23.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0
24.00	80824.2	0.0	4.6	1200.6	191.2	49.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.8	0.0
25.00	80796.8	0.0	4.5	1206.9	208.1	53.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.9	0.0
26.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0
27.00	80824.2	0.0	4.6	1200.6	191.2	49.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.8	0.0
28.00	80796.8	0.0	4.5	1206.9	208.1	53.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.9	0.0
29.00	80851.7	0.0	4.6	1194.3	174.3	45.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82274.5	0.0

ALWR-8
HEU3(TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	80724.5	26.2	4.8	1167.2	128.5	24.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82077.9	196.6
2.00	80505.1	26.0	4.8	1172.4	143.6	33.2	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81887.8	387.9
3.00	80291.2	25.8	4.7	1172.7	157.9	41.5	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81697.4	579.3
4.00	80290.5	25.8	4.7	1172.8	158.3	41.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81697.4	579.3
5.00	80289.8	25.8	4.7	1172.8	158.7	42.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81697.3	579.3
6.00	80261.9	25.7	4.7	1179.5	175.8	46.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81697.7	579.3
7.00	80234.8	25.6	4.6	1186.0	192.5	49.9	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81697.9	579.3
8.00	80207.7	25.5	4.6	1192.3	209.2	53.8	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.1	579.3
9.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3
10.00	80206.3	25.5	4.6	1192.7	210.1	54.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.3	579.3
11.00	80178.6	25.4	4.5	1199.1	227.3	58.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.4	579.4
12.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3
13.00	80206.3	25.5	4.6	1192.7	210.1	54.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.3	579.3
14.00	80178.6	25.4	4.5	1199.1	227.3	58.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.4	579.4
15.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3
16.00	80206.3	25.5	4.6	1192.7	210.1	54.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.3	579.3
17.00	80178.6	25.4	4.5	1199.1	227.3	58.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.4	579.4
18.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3
19.00	80206.3	25.5	4.6	1192.7	210.1	54.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.3	579.3
20.00	80178.6	25.4	4.5	1199.1	227.3	58.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.4	579.4
21.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3
22.00	80206.3	25.5	4.6	1192.7	210.1	54.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.3	579.3
23.00	80178.6	25.4	4.5	1199.1	227.3	58.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.4	579.4
24.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3
25.00	80206.3	25.5	4.6	1192.7	210.1	54.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.3	579.3
26.00	80178.6	25.4	4.5	1199.1	227.3	58.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.4	579.4
27.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3
28.00	80206.3	25.5	4.6	1192.7	210.1	54.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.3	579.3
29.00	80178.6	25.4	4.5	1199.1	227.3	58.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.4	579.4
30.00	80207.0	25.5	4.6	1192.5	209.6	53.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81698.2	579.3

ALWR-9
PU (U)-RPU

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.1	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	4639.7	4991.2
FINAL CORE	5702.8	1247.8
ANNUAL EQUILIBRIUM	1425.7	1247.8
30 YR CUMULATIVE	45984.9	37433.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	6657.8	7410.8
FINAL CORE	8183.2	1852.7
ANNUAL EQUILIBRIUM	2045.8	1852.7
30 YR CUMULATIVE	65985.8	55580.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	203.0	124.0
FINAL CORE	200.0	31.0
ANNUAL EQUILIBRIUM	50.0	31.0
30 YR CUMULATIVE	1653.0	930.0
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		29240.0
THERMAL EFFICIENCY		0.334

ALWR-9
PU(U)-RPU
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	203.0	0.0	101295.2	103.5	3738.7	1601.0	901.0	313.6	0.0	108155.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	50.0	0.0	24943.2	31.8	1148.8	491.9	276.9	96.4	0.0	27039.0	0.0

ALWR-9

PU(U)-RPU

DISCHARGE DATA BY YEAR

(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	31.0	4.9	24281.4	32.9	973.4	470.7	274.4	101.3	0.0	26170.0	0.0

ALWR-10
HEU3 (TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	134.3	132.6
FINAL CORE	134.2	44.2
ANNUAL EQUILIBRIUM	89.5	88.4
30 YR CUMULATIVE	2774.0	2652.8
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	1978.1	1917.6
FINAL CORE	2009.1	639.2
ANNUAL EQUILIBRIUM	1339.4	1278.4
30 YR CUMULATIVE	41490.4	38352.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	26.7	61.2
FINAL CORE	27.1	20.4
ANNUAL EQUILIBRIUM	18.1	40.8
30 YR CUMULATIVE	560.6	1224.0
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		0.50
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		11310.0
THERMAL EFFICIENCY		0.334

ALWR-10

HEU3(TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	107140.5	0.0	8.3	1978.1	188.4	26.7	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109343.9	0.0
0.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
1.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
1.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
2.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
2.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
3.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
3.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
4.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
4.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
5.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
5.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
6.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
6.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
7.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
7.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
8.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
8.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
9.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
9.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
10.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
10.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
11.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
11.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
12.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
12.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
13.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
13.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
14.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
14.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
15.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
15.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
16.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
16.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
17.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
17.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
18.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
18.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
19.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
19.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
20.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
20.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
21.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
21.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
22.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
22.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
23.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
23.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
24.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0

24.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
25.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
25.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
26.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
26.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
27.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
27.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
28.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
28.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
29.00	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
29.50	35701.9	0.0	2.8	669.7	63.8	9.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0

ALWR-10

HEU3(TH)-RUF

DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
1.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
1.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
2.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
2.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
3.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
3.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
4.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
4.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
5.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
5.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
6.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
6.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
7.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
7.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
8.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
8.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
9.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
9.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
10.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
10.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
11.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
11.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
12.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
12.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
13.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
13.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
14.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
14.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
15.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
15.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
16.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
16.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
17.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
17.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
18.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
18.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
19.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
19.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
20.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
20.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
21.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
21.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
22.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
22.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
23.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
23.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
24.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
24.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0

25.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
25.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
26.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
26.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
27.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
27.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
28.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
28.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
29.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
29.50	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0
30.00	35280.8	38.7	2.3	600.5	102.5	20.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36047.5	0.0

ALWR-11
HEU3 (TH)-RUF, X(22)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	134.0	130.9
FINAL CORE	133.8	43.6
ANNUAL EQUILIBRIUM	44.6	43.6
30 YR CUMULATIVE	1427.7	1308.6
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	2186.1	1977.6
FINAL CORE	2290.2	659.2
ANNUAL EQUILIBRIUM	763.4	659.2
30 YR CUMULATIVE	24324.7	19775.9
URANIUM-235 (KG/GWE)		
INITIAL CORE	29.5	98.7
FINAL CORE	30.9	32.9
ANNUAL EQUILIBRIUM	10.3	32.9
30 YR CUMULATIVE	328.2	987.0
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		22620.0
THERMAL EFFICIENCY		0.334

ALWR-11
HEU3(TH)-RUF,X(22)

CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	106908.9	0.0	9.1	2186.1	208.2	29.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109343.9	0.0
1.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
2.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
3.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
4.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
5.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
6.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
7.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
8.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
9.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
10.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
11.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
12.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
13.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
14.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
15.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
16.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
17.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
18.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
19.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
20.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
21.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
22.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
23.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
24.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
25.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
26.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
27.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
28.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0
29.00	35597.6	0.0	3.2	763.4	72.7	10.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36448.0	0.0

ALWR-11
HED3(TH)-RUF,X(22)

DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
2.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
3.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
4.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
5.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
6.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
7.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
8.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
9.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
10.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
11.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
12.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
13.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
14.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
15.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
16.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
17.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
18.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35549.0	0.0
19.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
20.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
21.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
22.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
23.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
24.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
25.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
26.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
27.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
28.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
29.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0
30.00	34806.8	37.1	2.7	622.1	142.2	32.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35649.0	0.0

ALWR-12
HEU3 (TH)-RUF, X(30)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	133.9	129.8
FINAL CORE	133.6	32.4
ANNUAL EQUILIBRIUM	33.4	32.4
30 YR CUMULATIVE	1102.6	973.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	2268.1	1976.0
FINAL CORE	2443.6	494.0
ANNUAL EQUILIBRIUM	610.9	494.0
30 YR CUMULATIVE	19984.2	14820.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	30.6	120.8
FINAL CORE	32.8	30.2
ANNUAL EQUILIBRIUM	8.2	30.2
30 YR CUMULATIVE	268.4	906.0
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30160.0
THERMAL EFFICIENCY		0.334

ALWR-12
HEU3(TH)-RUF,X(30)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	106817.5	0.0	9.4	2268.1	216.0	30.6	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109343.9	0.0
1.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
2.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
3.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
4.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
5.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
6.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
7.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
8.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
9.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
10.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
11.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
12.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
13.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
14.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
15.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
16.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
17.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
18.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
19.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
20.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
21.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
22.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
23.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
24.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
25.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
26.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
27.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
28.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0
29.00	26655.6	0.0	2.5	610.9	58.2	8.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27336.0	0.0

ALWR-12
HEU3(TH)-RDF,X(30)

DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
2.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
3.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
4.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
5.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
6.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
7.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
8.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
9.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
10.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
11.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
12.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
13.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
14.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
15.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
16.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
17.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
18.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
19.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
20.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
21.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
22.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
23.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
24.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
25.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
26.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
27.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
28.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
29.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0
30.00	25883.9	27.5	2.2	466.5	123.1	30.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26539.0	0.0

ALWR-13
MEU3 (TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	111.8	105.9
FINAL CORE	108.7	26.5
ANNUAL EQUILIBRIUM	27.2	26.5
30 YR CUMULATIVE	899.8	794.3
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	9.1	25.4
FINAL CORE	10.1	6.3
ANNUAL EQUILIBRIUM	2.5	6.3
30 YR CUMULATIVE	82.1	190.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	350.4
FINAL CORE	0.0	87.6
ANNUAL EQUILIBRIUM	0.0	87.6
30 YR CUMULATIVE	0.0	2628.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	448.8
FINAL CORE	0.0	112.2
ANNUAL EQUILIBRIUM	0.0	112.2
30 YR CUMULATIVE	0.0	3366.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	2662.8	2174.4
FINAL CORE	2956.0	543.6
ANNUAL EQUILIBRIUM	739.0	543.6
30 YR CUMULATIVE	24093.8	16308.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	74.3	140.8
FINAL CORE	82.4	35.2
ANNUAL EQUILIBRIUM	20.6	35.2
30 YR CUMULATIVE	671.7	1056.0
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		29610.0
THERMAL EFFICIENCY		0.334

ALWR-13
MEU3(U,TH)-RUF

CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	89175.9	0.0	11.0	2662.8	253.6	74.3	2.7	19184.7	0.0	0.0	0.0	0.0	0.0	0.0	111364.8	0.0
1.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
2.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
3.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
4.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
5.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
6.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
7.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
8.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
9.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
10.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
11.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
12.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
13.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
14.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
15.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
16.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
17.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
18.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
19.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
20.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
21.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
22.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
23.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
24.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
25.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
26.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
27.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
28.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0
29.00	21683.1	0.0	3.1	739.0	70.4	20.6	0.8	5324.0	0.0	0.0	0.0	0.0	0.0	0.0	27841.0	0.0

ALWR-13
MEU3(U,TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
2.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
3.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
4.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
5.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
6.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
7.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
8.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
9.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
10.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
11.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
12.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
13.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
14.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
15.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
16.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
17.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
18.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
19.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
20.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
21.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
22.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
23.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
24.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
25.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
26.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
27.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
28.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
29.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0
30.00	21127.6	19.4	2.3	524.2	124.0	35.2	6.0	5073.1	0.6	79.5	20.5	8.1	3.5	0.0	27024.0	0.0

ALWR-14
PU (TH) -RPU

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	130.1	125.5
FINAL CORE	128.3	31.4
ANNUAL EQUILIBRIUM	32.1	31.4
30 YR CUMULATIVE	1060.2	941.6
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	4418.8	2734.4
FINAL CORE	5429.6	683.6
ANNUAL EQUILIBRIUM	1357.4	683.6
30 YR CUMULATIVE	43783.3	20508.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	6340.8	4817.2
FINAL CORE	7791.6	1204.3
ANNUAL EQUILIBRIUM	1947.9	1204.3
30 YR CUMULATIVE	62829.7	36128.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	1453.6
FINAL CORE	0.0	363.4
ANNUAL EQUILIBRIUM	0.0	363.4
30 YR CUMULATIVE	0.0	10901.9
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	21.2
FINAL CORE	0.0	5.3
ANNUAL EQUILIBRIUM	0.0	5.3
30 YR CUMULATIVE	0.0	159.0
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		29930.0
THERMAL EFFICIENCY		0.334

ALWR-14
PU(TH)-RPU

CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	103824.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.6	3560.7	1524.7	858.1	298.7	0.0	110164.9	0.0
1.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
2.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
3.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
4.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
5.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
6.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
7.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
8.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
9.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
10.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
11.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
12.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
13.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
14.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
15.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
16.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
17.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
18.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
19.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
20.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
21.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
22.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
23.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
24.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
25.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
26.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
27.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
28.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0
29.00	25593.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	1093.8	468.4	263.6	91.8	0.0	27541.0	0.0

ALWR-14

PU(TH) -RPU

DISCHARGE DATA BY YEAR

(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
2.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
3.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
4.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
5.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
6.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
7.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
8.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
9.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
10.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
11.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
12.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
13.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
14.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
15.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
16.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
17.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
18.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
19.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
20.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
21.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
22.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
23.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
24.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
25.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
26.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
27.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
28.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
29.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0
30.00	25043.9	18.6	0.0	344.8	26.8	5.3	0.3	0.0	30.0	433.5	390.8	250.1	99.9	0.0	26644.0	0.0

ALWR-15
LEU3 (U)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	32.6	31.6
FINAL CORE	32.6	7.9
ANNUAL EQUILIBRIUM	8.2	7.9
30 YR CUMULATIVE	269.3	237.3
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	5.8	2.5
FINAL CORE	9.4	0.6
ANNUAL EQUILIBRIUM	2.3	0.6
30 YR CUMULATIVE	73.9	18.4
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1064.0
FINAL CORE	0.0	266.0
ANNUAL EQUILIBRIUM	0.0	266.0
30 YR CUMULATIVE	0.0	7980.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1317.2
FINAL CORE	0.0	329.3
ANNUAL EQUILIBRIUM	0.0	329.3
30 YR CUMULATIVE	0.0	9879.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	2563.8	1356.4
FINAL CORE	2738.4	339.1
ANNUAL EQUILIBRIUM	684.6	339.1
30 YR CUMULATIVE	22417.1	10173.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	200.0	181.2
FINAL CORE	213.6	45.3
ANNUAL EQUILIBRIUM	53.4	45.3
30 YR CUMULATIVE	1748.6	1359.0
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		28090.0
THERMAL EFFICIENCY		0.334

ALWR-15
LEU3(U,TH)-RUF

CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	26051.8	0.0	10.7	2563.8	244.1	200.0	2.7	88324.9	0.0	0.0	0.0	0.0	0.0	0.0	117397.9	0.0
1.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
2.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
3.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
4.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
5.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
6.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
7.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
8.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
9.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
10.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
11.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
12.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
13.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
14.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
15.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
16.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
17.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
18.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
19.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
20.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
21.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
22.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
23.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
24.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
25.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
26.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
27.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
28.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0
29.00	6513.0	0.0	2.8	684.6	65.2	53.4	0.7	22029.3	0.0	0.0	0.0	0.0	0.0	0.0	29349.0	0.0

ALWR-15
LEU3(U,TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
2.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
3.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
4.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
5.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
6.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
7.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
8.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
9.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
10.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
11.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
12.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
13.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
14.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
15.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
16.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
17.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
18.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
19.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
20.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
21.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
22.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
23.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
24.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
25.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
26.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
27.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
28.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
29.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0
30.00	6311.7	7.2	1.6	331.9	97.6	45.3	9.1	21396.3	1.5	229.1	55.9	36.9	5.9	0.0	28530.0	0.0

BWR-1
LEU5 (U)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	497.0	267.6
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	218.3	56.2
30 YR CUMULATIVE	6827.8	1729.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	219.7	48.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	132.4	9.1
30 YR CUMULATIVE	4059.2	286.2
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	730.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	180.0
30 YR CUMULATIVE	0.0	5410.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1010.0
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	260.0
30 YR CUMULATIVE	0.0	7770.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	2200.0	1320.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	920.0	280.0
30 YR CUMULATIVE	28880.0	8600.0

NUMBER OF BATCHES	4
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	28400.0 26850 ??
THERMAL EFFICIENCY	0.334 0.316 ??

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

BWR-1
LEU5 (U)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2200.0	0.0	120000.0	0.0	0.0	0.0	0.0	0.0	0.0	122200.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	920.0	0.0	29600.0	0.0	0.0	0.0	0.0	0.0	0.0	30520.0	0.0

BWR-1
LEU5 (U)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	480.0	0.0	44900.0	0.0	190.0	40.0	0.0	0.0	0.0	45610.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	29100.0	0.0	180.0	80.0	0.0	0.0	0.0	29640.0	0.0

BWR-2
LEU5 (U)-STI

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	519.8	173.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	198.0	41.0
30 YR CUMULATIVE	6260.7	1238.6
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	237.2	3.6
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	115.0	1.2
30 YR CUMULATIVE	3571.2	35.2
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	650.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	170.0
30 YR CUMULATIVE	0.0	5070.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	930.0
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	250.0
30 YR CUMULATIVE	0.0	7430.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	2290.0	940.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	840.0	220.0
30 YR CUMULATIVE	26650.0	6660.0

NUMBER OF BATCHES	4
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	28400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

BWR-2
LEU5 (U)-STI
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2290.0	0.0	120000.0	0.0	0.0	0.0	0.0	0.0	0.0	122290.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	840.0	0.0	29700.0	0.0	0.0	0.0	0.0	0.0	0.0	30540.0	0.0

BWR-2
LEU5 (U)-STI
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	280.0	0.0	39700.0	0.0	140.0	40.0	0.0	0.0	0.0	40160.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	220.0	0.0	29200.0	0.0	170.0	80.0	0.0	0.0	0.0	29670.0	0.0

BWR-3
LEU5 (U)-X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	519.8	146.9
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	161.3	22.2
30 YR CUMULATIVE	5198.9	656.4
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	237.2	2.2
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	107.5	0.4
30 YR CUMULATIVE	3355.4	10.4
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	830.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	130.0
30 YR CUMULATIVE	0.0	3820.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1260.0
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	200.0
30 YR CUMULATIVE	0.0	5860.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	2290.0	810.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	670.0	120.0
30 YR CUMULATIVE	21720.0	3570.0

NUMBER OF BATCHES	7
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	47000.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

BWR-3
LEU5 (U)-X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2290.0	0.0	120000.0	0.0	0.0	0.0	0.0	0.0	0.0	122290.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	16900.0	0.0	0.0	0.0	0.0	0.0	0.0	17570.0	0.0

BWR-3
LEU5 (U)-X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	90.0	0.0	17300.0	0.0	50.0	10.0	0.0	0.0	0.0	17450.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	120.0	0.0	16300.0	0.0	130.0	70.0	0.0	0.0	0.0	16620.0	0.0

FMSR
NU5 (U)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	2055.0	145.0
FINAL CORE	10.4	189.6
ANNUAL EQUILIBRIUM	10.4	0.3
30 YR CUMULATIVE	2356.2	920.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	1809.9	107.9
FINAL CORE	0.0	131.7
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	1809.9	671.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	230.0
FINAL CORE	0.0	6272.5
ANNUAL EQUILIBRIUM	0.0	518.2
30 YR CUMULATIVE	0.0	17268.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	230.0
FINAL CORE	0.0	6904.8
ANNUAL EQUILIBRIUM	0.0	600.4
30 YR CUMULATIVE	0.0	19462.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	8476.0	592.0
FINAL CORE	114.4	782.5
ANNUAL EQUILIBRIUM	57.2	14.7
30 YR CUMULATIVE	10134.8	4021.8
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		142000.0
THERMAL EFFICIENCY		0.360

FMSR
WU5 (U)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	1330.0	0.0	186070.0	0.0	0.0	0.0	0.0	0.0	0.0	187400.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	7146.0	0.0	537.9	0.0	0.0	0.0	0.0	0.0	0.0	7683.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
2.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	57.2	0.0	8109.3	0.0	0.0	0.0	0.0	0.0	0.0	8166.5	0.0

FMSR
NU5 (U)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
2.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
3.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
4.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
5.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
6.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
7.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
8.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
9.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
10.00	0.0	0.0	0.0	0.0	0.0	296.0	0.0	5089.0	0.0	115.0	0.0	0.0	0.0	0.0	5500.0	163.2
11.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
12.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
13.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
14.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
15.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
16.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
17.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
18.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
19.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
20.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
21.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
22.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
23.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
24.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
25.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
26.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
27.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
28.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
29.00	0.0	0.0	0.0	0.0	0.0	14.7	7.1	6717.9	0.0	509.1	81.2	9.1	1.0	0.0	7340.1	827.7
30.00	0.0	0.0	0.0	0.0	0.0	782.5	108.9	17362.5	0.0	6208.2	524.5	64.3	7.8	0.0	25158.7	0.0

GCFR-1
PU(U)/TH/TH-HM CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	3.3	0.1
FINAL CORE	3.3	0.0
ANNUAL EQUILIBRIUM	1.1	0.0
30 YR CUMULATIVE	35.0	0.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	4438.5	4141.8
FINAL CORE	4638.8	3472.9
ANNUAL EQUILIBRIUM	1511.7	1342.0
30 YR CUMULATIVE	49344.5	43321.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	5739.7	5561.9
FINAL CORE	5998.4	3767.0
ANNUAL EQUILIBRIUM	1954.8	1837.6
30 YR CUMULATIVE	63807.9	58267.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	68.7	45.7
FINAL CORE	68.0	45.8
ANNUAL EQUILIBRIUM	22.5	12.1
30 YR CUMULATIVE	726.6	411.5

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	95000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-1
PU(U)/TH/TH-HM CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	68.7	0.0	27750.0	0.0	3855.0	1162.0	583.5	139.2	0.0	33558.4	0.0
1.00	0.0	0.0	0.0	0.0	0.0	22.9	0.0	9273.0	0.0	1428.0	430.3	216.1	51.5	0.0	11421.9	0.0
2.00	0.0	0.0	0.0	0.0	0.0	22.4	0.0	9073.0	0.0	1331.0	401.1	201.4	48.0	0.0	11077.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	9129.0	0.0	1291.0	389.1	195.4	46.6	0.0	11073.7	0.0
4.00	0.0	0.0	0.0	0.0	0.0	23.0	0.0	9307.0	0.0	1404.0	423.0	212.4	50.7	0.0	11420.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9082.0	0.0	1324.0	399.1	200.4	47.8	0.0	11075.8	0.0
6.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9108.0	0.0	1306.0	393.6	197.6	47.1	0.0	11074.9	0.0
7.00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0
9.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9098.0	0.0	1313.0	395.7	198.7	47.4	0.0	11075.3	0.0
10.00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0
12.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9098.0	0.0	1313.0	395.7	198.7	47.4	0.0	11075.3	0.0
13.00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0
15.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9098.0	0.0	1313.0	395.7	198.7	47.4	0.0	11075.3	0.0
16.00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0
18.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9098.0	0.0	1313.0	395.7	198.7	47.4	0.0	11075.3	0.0
19,00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0
21.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9098.0	0.0	1313.0	395.7	198.7	47.4	0.0	11075.3	0.0
22.00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0
24.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9098.0	0.0	1313.0	395.7	198.7	47.4	0.0	11075.3	0.0
25.00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0
27.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9098.0	0.0	1313.0	395.7	198.7	47.4	0.0	11075.3	0.0
28.00	0.0	0.0	0.0	0.0	0.0	23.1	0.0	9321.0	0.0	1394.0	420.1	211.0	50.3	0.0	11419.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	22.5	0.0	9085.0	0.0	1322.0	398.4	200.1	47.7	0.0	11075.7	0.0

GCFR-1
PU(U)/TH/TH-HM CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	18.9	0.9	9149.0	0.0	1300.0	416.8	165.5	51.5	0.0	11102.6	371.2
2.00	0.0	0.0	0.0	0.0	0.0	14.8	1.6	8627.0	0.0	1226.0	416.4	133.5	51.9	0.0	10471.2	712.4
3.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8378.0	0.0	1201.0	430.2	115.8	53.4	0.0	10192.5	1035.0
4.00	0.0	0.0	0.0	0.0	0.0	12.6	2.1	8512.0	0.0	1307.0	478.8	132.6	59.8	0.0	10504.8	1080.0
5.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8310.0	0.0	1234.0	448.5	122.2	55.9	0.0	10184.7	1050.0
6.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8363.0	0.0	1214.0	436.2	118.6	54.2	0.0	10200.3	1029.0
7.00	0.0	0.0	0.0	0.0	0.0	12.6	2.1	8548.0	0.0	1295.0	470.9	130.6	58.8	0.0	10518.0	1062.0
8.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
9.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8344.0	0.0	1222.0	440.8	120.0	54.8	0.0	10195.8	1036.0
10.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8561.0	0.0	1290.0	467.9	129.7	58.3	0.0	10521.7	1057.0
11.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
12.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8344.0	0.0	1222.0	440.8	120.0	54.8	0.0	10195.8	1036.0
13.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8561.0	0.0	1290.0	467.9	129.7	58.3	0.0	10521.7	1057.0
14.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
15.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8344.0	0.0	1222.0	440.8	120.0	54.8	0.0	10195.8	1036.0
16.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8561.0	0.0	1290.0	467.9	129.7	58.3	0.0	10521.7	1057.0
17.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
18.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8344.0	0.0	1222.0	440.8	120.0	54.8	0.0	10195.8	1036.0
19.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8561.0	0.0	1290.0	467.9	129.7	58.3	0.0	10521.7	1057.0
20.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
21.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8344.0	0.0	1222.0	440.8	120.0	54.8	0.0	10195.8	1036.0
22.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8561.0	0.0	1290.0	467.9	129.7	58.3	0.0	10521.7	1057.0
23.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
24.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8344.0	0.0	1222.0	440.8	120.0	54.8	0.0	10195.8	1036.0
25.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8561.0	0.0	1290.0	467.9	129.7	58.3	0.0	10521.7	1057.0
26.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
27.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8344.0	0.0	1222.0	440.8	120.0	54.8	0.0	10195.8	1036.0
28.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8561.0	0.0	1290.0	467.9	129.7	58.3	0.0	10521.7	1057.0
29.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8320.0	0.0	1231.0	446.4	121.6	55.6	0.0	10188.8	1045.0
30.00	0.0	0.0	0.0	0.0	0.0	45.8	4.5	25970.0	0.0	3038.0	131.1	434.9	163.0	0.0	29787.3	2128.0

GCFR-1
PU(U)/TH/TH-HM AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	37.6	36.8
FINAL CORE	37.6	36.8
ANNUAL EQUILIBRIUM	12.4	12.0
30 YR CUMULATIVE	401.1	389.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	580.8
FINAL CORE	0.0	563.6
ANNUAL EQUILIBRIUM	0.0	273.2
30 YR CUMULATIVE	0.0	8249.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.1
FINAL CORE	0.0	0.1
ANNUAL EQUILIBRIUM	0.0	0.1
30 YR CUMULATIVE	0.0	2.2

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	95000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-1
PU(U)/TH/TH-HM AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	30000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30000.0	0.0
1.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
2.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
3.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
4.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
5.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
6.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
7.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
8.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
9.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
10.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
11.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
12.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
13.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
14.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
15.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
16.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
17.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
18.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
19.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
20.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
21.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
22.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
23.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
24.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
25.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
26.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
27.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0
28.00	10200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10200.0	0.0
29.00	9898.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9898.0	0.0

GCFR-1
PU(U)/TH/TH-HM AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	10090.0	15.6	0.0	89.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10195.5	3.8
2.00	9683.0	14.9	0.0	182.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9882.2	13.7
3.00	9580.0	14.5	0.0	264.6	4.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9863.6	28.8
4.00	9892.0	14.5	0.0	260.5	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.2	27.4
5.00	9588.0	14.5	0.0	259.1	4.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.9	27.7
6.00	9588.0	14.5	0.0	258.8	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.6	27.6
7.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	27.0
8.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
9.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
10.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	26.9
11.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
12.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
13.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	26.9
14.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
15.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
16.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	26.9
17.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
18.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
19.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	26.9
20.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
21.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
22.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	26.9
23.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
24.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
25.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	26.9
26.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
27.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
28.00	9894.0	14.5	0.0	258.7	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10171.3	26.9
29.00	9588.0	14.5	0.0	258.7	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9865.5	27.6
30.00	29380.0	44.0	0.1	519.6	6.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29950.6	43.8

GCFR-1
PU(U)/TH/TH-HM RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	114.8	51.6
FINAL CORE	59.1	114.0
ANNUAL EQUILIBRIUM	17.4	20.5
30 YR CUMULATIVE	654.1	643.8
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	442.2
FINAL CORE	0.0	633.1
ANNUAL EQUILIBRIUM	0.0	273.4
30 YR CUMULATIVE	0.0	7475.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.9

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	95000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-1
PU(U)/TH/TH-HM RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	91620.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91620.0	0.0
1.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
2.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
3.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
4.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
5.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
6.00	16660.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16660.0	0.0
7.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
8.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
9.00	19430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19430.0	0.0
10.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
11.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
12.00	16660.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16660.0	0.0
13.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
14.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
15.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
16.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
17.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
18.00	22210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22210.0	0.0
19.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
20.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
21.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
22.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
23.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
24.00	16660.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16660.0	0.0
25.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
26.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
27.00	19430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19430.0	0.0
28.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0
29.00	13880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13880.0	0.0

GCFR-1
PU(U)/TH/TH-HM RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	13790.0	12.8	0.0	73.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13877.1	0.0
2.00	13700.0	12.4	0.0	153.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13866.8	0.0
3.00	13680.0	12.3	0.0	177.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13871.7	0.0
4.00	13640.0	12.3	0.0	204.2	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13858.6	0.0
5.00	13630.0	12.3	0.0	213.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13858.3	0.0
6.00	16360.0	13.3	0.0	258.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16634.0	0.0
7.00	13620.0	12.3	0.0	224.1	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13858.9	0.0
8.00	13620.0	12.3	0.0	224.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13859.6	0.0
9.00	19130.0	13.0	0.0	263.4	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19409.0	0.0
10.00	13620.0	12.3	0.0	225.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.1	0.0
11.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
12.00	16360.0	13.2	0.0	260.2	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16636.2	0.0
13.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
14.00	13620.0	12.3	0.0	225.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.1	0.0
15.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
16.00	13620.0	12.3	0.0	225.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.1	0.0
17.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
18.00	21870.0	13.9	0.0	298.4	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22185.2	0.0
19.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
20.00	13620.0	12.3	0.0	225.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.1	0.0
21.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
22.00	13620.0	12.3	0.0	225.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.1	0.0
23.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
24.00	16360.0	13.2	0.0	260.2	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16636.2	0.0
25.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
26.00	13620.0	12.3	0.0	225.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.1	0.0
27.00	19130.0	13.0	0.0	263.4	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19409.0	0.0
28.00	13620.0	12.3	0.0	225.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.1	0.0
29.00	13620.0	12.3	0.0	225.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13860.0	0.0
30.00	90940.0	39.0	0.0	594.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91577.3	0.0

GCFR-2
PU(U)/U/U-HM CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	3.3	0.1
FINAL CORE	3.3	0.0
ANNUAL EQUILIBRIUM	1.1	0.0
30 YR CUMULATIVE	35.3	0.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	4287.7	4048.0
FINAL CORE	4447.6	4149.8
ANNUAL EQUILIBRIUM	1451.9	1313.3
30 YR CUMULATIVE	47338.1	43062.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	5544.2	5427.6
FINAL CORE	5751.4	5572.8
ANNUAL EQUILIBRIUM	1877.6	1794.4
30 YR CUMULATIVE	61214.1	58377.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	69.1	46.0
FINAL CORE	68.6	46.1
ANNUAL EQUILIBRIUM	22.7	12.2
30 YR CUMULATIVE	732.8	413.3

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	95000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-2
PU(U)/U/U-HM CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	69.1	0.0	27940.0	0.0	3724.0	1122.0	563.7	134.5	0.0	33553.3	0.0
1.00	0.0	0.0	0.0	0.0	0.0	23.2	0.0	9370.0	0.0	1360.0	409.8	205.8	49.1	0.0	11417.9	0.0
2.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	9150.0	0.0	1277.0	384.9	193.3	46.1	0.0	11073.9	0.0
3.00	0.0	0.0	0.0	0.0	0.0	22.8	0.0	9197.0	0.0	1244.0	374.8	188.2	44.9	0.0	11071.7	0.0
4.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9397.0	0.0	1341.0	404.1	202.9	48.4	0.0	11416.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9159.0	0.0	1271.0	383.0	192.3	45.9	0.0	11073.8	0.0
6.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9180.0	0.0	1256.0	378.5	190.0	45.3	0.0	11072.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
8.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0
9.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9172.0	0.0	1261.0	380.2	190.9	45.5	0.0	11072.3	0.0
10.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
11.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0
12.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9172.0	0.0	1261.0	380.2	190.9	45.5	0.0	11072.3	0.0
13.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
14.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0
15.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9172.0	0.0	1261.0	380.2	190.9	45.5	0.0	11072.3	0.0
16.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
17.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0
18.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9172.0	0.0	1261.0	380.2	190.9	45.5	0.0	11072.3	0.0
19.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
20.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0
21.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9172.0	0.0	1261.0	380.2	190.9	45.5	0.0	11072.3	0.0
22.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0
24.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9172.0	0.0	1261.0	380.2	190.9	45.5	0.0	11072.3	0.0
25.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
26.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0
27.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9172.0	0.0	1261.0	380.2	190.9	45.5	0.0	11072.3	0.0
28.00	0.0	0.0	0.0	0.0	0.0	23.3	0.0	9408.0	0.0	1333.0	401.7	201.7	48.1	0.0	11415.8	0.0
29.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	9161.0	0.0	1269.0	382.4	192.0	45.8	0.0	11072.9	0.0

GCFR-2
PU(U)/U/U-HM CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	19.0	1.0	9214.0	0.0	1264.0	403.5	159.9	49.8	0.0	11111.2	358.4
2.00	0.0	0.0	0.0	0.0	0.0	14.9	1.6	8687.0	0.0	1201.0	404.7	129.1	50.3	0.0	10488.6	689.8
3.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8436.0	0.0	1182.0	419.5	112.0	51.8	0.0	10215.6	1006.0
4.00	0.0	0.0	0.0	0.0	0.0	12.6	2.1	8597.0	0.0	1273.0	460.9	126.1	57.3	0.0	10529.0	1047.0
5.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	8378.0	0.0	1208.0	434.7	117.2	53.9	0.0	10206.1	1021.0
6.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8423.0	0.0	1192.0	424.3	114.2	52.5	0.0	10220.3	1003.0
7.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8627.0	0.0	1263.0	454.6	124.5	56.4	0.0	10540.4	1032.0
8.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
9.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8407.0	0.0	1198.0	128.1	115.3	53.0	0.0	9915.7	1008.0
10.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8637.0	0.0	1259.0	452.2	123.8	56.1	0.0	10543.0	1028.0
11.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
12.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8407.0	0.0	1198.0	428.1	115.3	53.0	0.0	10215.7	1008.0
13.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8637.0	0.0	1259.0	452.2	123.8	56.1	0.0	10543.0	1028.0
14.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
15.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8407.0	0.0	1198.0	428.1	115.3	53.0	0.0	10215.7	1008.0
16.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8637.0	0.0	1259.0	452.2	123.8	56.1	0.0	10543.0	1028.0
17.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
18.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8407.0	0.0	1198.0	428.1	115.3	53.0	0.0	10215.7	1008.0
19.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8637.0	0.0	1259.0	452.2	123.8	56.1	0.0	10543.0	1028.0
20.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
21.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8407.0	0.0	1198.0	428.1	115.3	53.0	0.0	10215.7	1008.0
22.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8637.0	0.0	1259.0	452.2	123.8	56.1	0.0	10543.0	1028.0
23.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
24.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8407.0	0.0	1198.0	428.1	115.3	53.0	0.0	10215.7	1008.0
25.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8637.0	0.0	1259.0	452.2	123.8	56.1	0.0	10543.0	1028.0
26.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
27.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8407.0	0.0	1198.0	428.1	115.3	53.0	0.0	10215.7	1008.0
28.00	0.0	0.0	0.0	0.0	0.0	12.7	2.1	8637.0	0.0	1259.0	452.2	123.8	56.1	0.0	10543.0	1028.0
29.00	0.0	0.0	0.0	0.0	0.0	12.2	2.1	8388.0	0.0	1205.0	432.8	116.7	53.7	0.0	10210.4	1016.0
30.00	0.0	0.0	0.0	0.0	0.0	46.1	4.6	26190.0	0.0	3733.0	1266.0	416.8	157.0	0.0	31813.5	2067.0

GCFR-2
PU(U)/U/U-HM AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	3.9	1.4
FINAL CORE	3.9	1.5
ANNUAL EQUILIBRIUM	1.3	0.1
30 YR CUMULATIVE	41.9	6.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	579.1
FINAL CORE	0.0	565.4
ANNUAL EQUILIBRIUM	0.0	275.7
30 YR CUMULATIVE	0.0	8320.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	592.4
FINAL CORE	0.0	578.0
ANNUAL EQUILIBRIUM	0.0	283.7
30 YR CUMULATIVE	0.0	8552.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	81.4	70.3
FINAL CORE	81.4	70.5
ANNUAL EQUILIBRIUM	26.9	21.6
30 YR CUMULATIVE	869.0	708.7

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	95000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-2
PU(U)/U/U-HM AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	81.4	0.0	32920.0	0.0	0.0	0.0	0.0	0.0	0.0	33001.4	0.0
1.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
2.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
3.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
4.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
6.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
7.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
8.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
9.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
11.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
12.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
13.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
14.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
15.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
16.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
17.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
18.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
19.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
20.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
21.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
22.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
23.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
24.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
25.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
26.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
27.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0
28.00	0.0	0.0	0.0	0.0	0.0	27.7	0.0	11200.0	0.0	0.0	0.0	0.0	0.0	0.0	11227.7	0.0
29.00	0.0	0.0	0.0	0.0	0.0	26.9	0.0	10860.0	0.0	0.0	0.0	0.0	0.0	0.0	10886.9	0.0

GCFR-2
PU(U)/U/U-HM AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	25.7	0.5	11080.0	0.0	102.6	1.0	0.0	0.0	0.0	11209.8	11.6
2.00	0.0	0.0	0.0	0.0	0.0	23.1	0.9	10640.0	0.0	195.8	3.9	0.0	0.0	0.0	10863.8	29.5
3.00	0.0	0.0	0.0	0.0	0.0	21.5	1.3	10530.0	0.0	280.5	8.3	0.1	0.0	0.0	10841.7	52.5
4.00	0.0	0.0	0.0	0.0	0.0	22.3	1.3	10870.0	0.0	277.6	7.9	0.1	0.0	0.0	11179.3	51.0
5.00	0.0	0.0	0.0	0.0	0.0	21.5	1.3	10540.0	0.0	276.0	8.0	0.1	0.0	0.0	10847.0	51.4
6.00	0.0	0.0	0.0	0.0	0.0	21.5	1.3	10540.0	0.0	275.7	8.0	0.1	0.0	0.0	10846.6	51.2
7.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
8.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
9.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
10.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
11.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
12.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
13.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
14.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
15.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
16.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
17.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
18.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
19.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
20.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
21.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
22.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
23.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
24.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
25.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
26.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
27.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
28.00	0.0	0.0	0.0	0.0	0.0	22.4	1.3	10870.0	0.0	276.1	7.8	0.1	0.0	0.0	11177.7	50.5
29.00	0.0	0.0	0.0	0.0	0.0	21.6	1.3	10540.0	0.0	275.6	8.0	0.1	0.0	0.0	10846.5	51.2
30.00	0.0	0.0	0.0	0.0	0.0	70.5	2.6	32270.0	0.0	565.2	12.6	0.2	0.0	0.0	32921.1	90.8

GCFR-2
PU(U)/U/U-HM RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	12.0	3.4
FINAL CORE	6.2	9.1
ANNUAL EQUILIBRIUM	1.8	0.9
30 YR CUMULATIVE	68.2	34.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	460.2
FINAL CORE	0.0	664.6
ANNUAL EQUILIBRIUM	0.0	289.3
30 YR CUMULATIVE	0.0	7879.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	466.2
FINAL CORE	0.0	673.3
ANNUAL EQUILIBRIUM	0.0	294.8
30 YR CUMULATIVE	0.0	8025.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	248.4	103.9
FINAL CORE	128.0	235.8
ANNUAL EQUILIBRIUM	37.6	39.6
30 YR CUMULATIVE	1415.2	1263.4

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	95000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-2
PU(U)/U/U-HM RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	248.4	0.0	100400.0	0.0	0.0	0.0	0.0	0.0	0.0	100648.4	0.0
1.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
2.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
3.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
4.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
5.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
6.00	0.0	0.0	0.0	0.0	0.0	45.2	0.0	18250.0	0.0	0.0	0.0	0.0	0.0	0.0	18295.2	0.0
7.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
8.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
9.00	0.0	0.0	0.0	0.0	0.0	52.7	0.0	21300.0	0.0	0.0	0.0	0.0	0.0	0.0	21352.7	0.0
10.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
11.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
12.00	0.0	0.0	0.0	0.0	0.0	45.2	0.0	18250.0	0.0	0.0	0.0	0.0	0.0	0.0	18295.2	0.0
13.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
14.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
15.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
17.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
18.00	0.0	0.0	0.0	0.0	0.0	60.2	0.0	24340.0	0.0	0.0	0.0	0.0	0.0	0.0	24400.2	0.0
19.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
20.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
21.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
23.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
24.00	0.0	0.0	0.0	0.0	0.0	45.2	0.0	18250.0	0.0	0.0	0.0	0.0	0.0	0.0	18295.2	0.0
25.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
26.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
27.00	0.0	0.0	0.0	0.0	0.0	52.7	0.0	21300.0	0.0	0.0	0.0	0.0	0.0	0.0	21352.7	0.0
28.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0
29.00	0.0	0.0	0.0	0.0	0.0	37.6	0.0	15210.0	0.0	0.0	0.0	0.0	0.0	0.0	15247.6	0.0

GCFR-2
PU(U)/U/U-HM RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	35.9	0.4	15110.0	0.0	89.0	0.6	0.0	0.0	0.0	15235.9	11.3
2.00	0.0	0.0	0.0	0.0	0.0	34.3	0.8	15020.0	0.0	172.0	2.3	0.0	0.0	0.0	15229.4	27.2
3.00	0.0	0.0	0.0	0.0	0.0	33.8	0.9	14980.0	0.0	199.2	3.1	0.0	0.0	0.0	15217.0	32.3
4.00	0.0	0.0	0.0	0.0	0.0	33.2	1.1	14950.0	0.0	228.2	4.1	0.0	0.0	0.0	15216.6	38.3
5.00	0.0	0.0	0.0	0.0	0.0	33.0	1.1	14940.0	0.0	238.3	4.5	0.1	0.0	0.0	15216.9	40.7
6.00	0.0	0.0	0.0	0.0	0.0	39.7	1.3	17930.0	0.0	286.7	5.5	0.1	0.0	0.0	18263.2	47.0
7.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	249.5	4.9	0.1	0.0	0.0	15208.4	43.4
8.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.3	4.9	0.1	0.0	0.0	15209.3	43.7
9.00	0.0	0.0	0.0	0.0	0.0	47.1	1.3	20960.0	0.0	290.5	5.3	0.1	0.0	0.0	21304.3	45.9
10.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.8	5.0	0.1	0.0	0.0	15209.8	43.7
11.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
12.00	0.0	0.0	0.0	0.0	0.0	39.6	1.3	17920.0	0.0	289.2	5.6	0.1	0.0	0.0	18255.8	47.7
13.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
14.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.8	5.0	0.1	0.0	0.0	15209.8	43.7
15.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
16.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.8	5.0	0.1	0.0	0.0	15209.8	43.7
17.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
18.00	0.0	0.0	0.0	0.0	0.0	53.9	1.5	23970.0	0.0	329.0	5.9	0.1	0.0	0.0	24360.4	49.8
19.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
20.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.8	5.0	0.1	0.0	0.0	15209.8	43.7
21.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
22.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.8	5.0	0.1	0.0	0.0	15209.8	43.7
23.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
24.00	0.0	0.0	0.0	0.0	0.0	39.6	1.3	17920.0	0.0	289.2	5.6	0.1	0.0	0.0	18255.8	47.7
25.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
26.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.8	5.0	0.1	0.0	0.0	15209.8	43.7
27.00	0.0	0.0	0.0	0.0	0.0	47.1	1.3	20960.0	0.0	290.5	5.3	0.1	0.0	0.0	21304.3	45.9
28.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.8	5.0	0.1	0.0	0.0	15209.8	43.7
29.00	0.0	0.0	0.0	0.0	0.0	32.8	1.2	14920.0	0.0	250.7	5.0	0.1	0.0	0.0	15209.7	43.8
30.00	0.0	0.0	0.0	0.0	0.0	235.8	3.1	99660.0	0.0	664.5	8.8	0.1	0.0	0.0	100572.2	81.6

GCFR-3
PU(TH)/TH/TH-HM CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	49.8	47.7
FINAL CORE	49.8	47.8
ANNUAL EQUILIBRIUM	16.4	15.5
30 YR CUMULATIVE	531.1	501.3
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	7087.5	5440.9
FINAL CORE	7092.2	5479.4
ANNUAL EQUILIBRIUM	2329.1	1563.5
30 YR CUMULATIVE	75681.3	52434.7
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	9164.8	7601.2
FINAL CORE	9171.3	7638.7
ANNUAL EQUILIBRIUM	3011.8	2278.9
30 YR CUMULATIVE	97867.5	75654.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	1283.8
FINAL CORE	0.0	1256.9
ANNUAL EQUILIBRIUM	0.0	585.6
30 YR CUMULATIVE	0.0	17802.9
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	1.0
FINAL CORE	0.0	0.9
ANNUAL EQUILIBRIUM	0.0	0.6
30 YR CUMULATIVE	0.0	18.3

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	67000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-3
PU(TH)/TH/TH-HM CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	39720.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6156.0	1855.0	931.5	222.3	0.0	48884.8	0.0
1.00	13500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2103.0	633.9	318.2	75.9	0.0	16631.0	0.0
2.00	13100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2036.0	613.6	308.1	73.5	0.0	16131.2	0.0
3.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2022.0	609.4	306.0	73.0	0.0	16130.4	0.0
4.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2107.0	635.1	318.8	76.1	0.0	16627.0	0.0
5.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2030.0	611.9	307.2	73.3	0.0	16132.4	0.0
6.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.6	306.1	73.0	0.0	16131.7	0.0
7.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
8.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0
9.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.7	306.1	73.0	0.0	16131.8	0.0
10.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
11.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0
12.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.7	306.1	73.0	0.0	16131.8	0.0
13.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
14.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0
15.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.7	306.1	73.0	0.0	16131.8	0.0
16.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
17.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0
18.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.7	306.1	73.0	0.0	16131.8	0.0
19.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
20.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0
21.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.7	306.1	73.0	0.0	16131.8	0.0
22.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
23.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0
24.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.7	306.1	73.0	0.0	16131.8	0.0
25.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
26.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0
27.00	13120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2023.0	609.7	306.1	73.0	0.0	16131.8	0.0
28.00	13490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2110.0	636.0	319.3	76.2	0.0	16631.5	0.0
29.00	13110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2027.0	611.0	306.8	73.2	0.0	16128.0	0.0

GCFR-3
PU(TH)/TH/TH-HM CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	13210.0	38.0	0.1	211.0	3.4	0.0	0.0	0.0	0.0	1842.0	650.6	275.5	80.3	0.0	16311.0	371.0
2.00	12570.0	36.0	0.3	404.8	10.0	0.2	0.0	0.0	0.0	1540.0	632.7	229.8	80.1	0.0	15504.0	711.3
3.00	12310.0	34.9	0.6	559.0	18.7	0.7	0.0	0.0	0.0	1351.0	634.4	202.6	82.2	0.0	15194.0	1037.0
4.00	12700.0	35.0	0.6	557.5	18.2	0.6	0.0	0.0	0.0	1432.0	658.9	213.4	85.0	0.0	15701.2	1030.0
5.00	12310.0	34.8	0.6	550.4	18.2	0.6	0.0	0.0	0.0	1369.0	637.6	204.8	82.5	0.0	15208.5	1025.0
6.00	12330.0	34.8	0.6	550.9	18.2	0.6	0.0	0.0	0.0	1360.0	633.3	203.4	81.9	0.0	15213.7	1019.0
7.00	12700.0	35.0	0.6	554.8	18.0	0.6	0.0	0.0	0.0	1438.0	660.0	214.1	85.1	0.0	15706.2	1027.0
8.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
9.00	12330.0	34.8	0.6	550.8	18.1	0.6	0.0	0.0	0.0	1360.0	633.5	203.5	81.9	0.0	15214.0	1019.0
10.00	12700.0	35.0	0.6	554.7	17.9	0.6	0.0	0.0	0.0	1440.0	660.9	214.4	85.3	0.0	15709.4	1028.0
11.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
12.00	12330.0	34.8	0.6	550.8	18.1	0.6	0.0	0.0	0.0	1360.0	633.5	203.5	81.9	0.0	15214.0	1019.0
13.00	12700.0	35.0	0.6	554.7	17.9	0.6	0.0	0.0	0.0	1440.0	660.9	214.4	85.3	0.0	15709.4	1028.0
14.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
15.00	12330.0	34.8	0.6	550.8	18.1	0.6	0.0	0.0	0.0	1360.0	633.5	203.5	81.9	0.0	15214.0	1019.0
16.00	12700.0	35.0	0.6	554.7	17.9	0.6	0.0	0.0	0.0	1440.0	660.9	214.4	85.3	0.0	15709.4	1028.0
17.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
18.00	12330.0	34.8	0.6	550.8	18.1	0.6	0.0	0.0	0.0	1360.0	633.5	203.5	81.9	0.0	15214.0	1019.0
19.00	12700.0	35.0	0.6	554.7	17.9	0.6	0.0	0.0	0.0	1440.0	660.9	214.4	85.3	0.0	15709.4	1028.0
20.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
21.00	12330.0	34.8	0.6	550.8	18.1	0.6	0.0	0.0	0.0	1360.0	633.5	203.5	81.9	0.0	15214.0	1019.0
22.00	12700.0	35.0	0.6	554.7	17.9	0.6	0.0	0.0	0.0	1440.0	660.9	214.4	85.3	0.0	15709.4	1028.0
23.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
24.00	12330.0	34.8	0.6	550.8	18.1	0.6	0.0	0.0	0.0	1360.0	633.5	203.5	81.9	0.0	15214.0	1019.0
25.00	12700.0	35.0	0.6	554.7	17.9	0.6	0.0	0.0	0.0	1440.0	660.9	214.4	85.3	0.0	15709.4	1028.0
26.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
27.00	12330.0	34.8	0.6	550.8	18.1	0.6	0.0	0.0	0.0	1360.0	633.5	203.5	81.9	0.0	15214.0	1019.0
28.00	12700.0	35.0	0.6	554.7	17.9	0.6	0.0	0.0	0.0	1440.0	660.9	214.4	85.3	0.0	15709.4	1028.0
29.00	12320.0	34.8	0.6	550.4	18.1	0.6	0.0	0.0	0.0	1365.0	635.9	204.3	82.2	0.0	15212.0	1022.0
30.00	38120.0	106.9	0.9	1150.0	30.8	0.9	0.0	0.0	0.0	4768.0	1917.0	711.4	242.3	0.0	47048.2	2072.0

GCFR-3
PU(TH)/TH/TH-HM AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	58.7	58.0
FINAL CORE	58.7	58.0
ANNUAL EQUILIBRIUM	19.4	19.0
30 YR CUMULATIVE	626.6	616.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	545.0
FINAL CORE	0.0	530.8
ANNUAL EQUILIBRIUM	0.0	259.9
30 YR CUMULATIVE	0.0	7843.4
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.9

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	67000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-3
PU(TH)/TH/TH-HM AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	46870.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46870.0	0.0
1.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
2.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
3.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
4.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
5.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
6.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
7.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
8.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
9.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
10.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
11.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
12.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
13.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
14.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
15.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
16.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
17.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
18.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
19.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
20.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
21.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
22.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
23.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
24.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
25.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
26.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
27.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0
28.00	15940.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15940.0	0.0
29.00	15460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15460.0	0.0

GCFR-3
PU(TH)/TH/TH-HM AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	15840.0	14.1	0.0	82.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15936.9	2.6
2.00	15270.0	13.5	0.0	170.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15455.0	8.8
3.00	15170.0	13.3	0.0	251.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15437.7	18.2
4.00	15660.0	13.3	0.0	249.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15924.9	17.6
5.00	15180.0	13.2	0.0	246.9	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.8	17.7
6.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
7.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.4	17.4
8.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
9.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
10.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.3	17.4
11.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
12.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
13.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.3	17.4
14.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
15.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
16.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.3	17.4
17.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
18.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
19.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.3	17.4
20.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
21.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
22.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.3	17.4
23.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
24.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
25.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.3	17.4
26.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
27.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
28.00	15660.0	13.3	0.0	247.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15923.3	17.4
29.00	15180.0	13.2	0.0	246.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15442.6	17.6
30.00	46300.0	40.0	0.0	490.8	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46835.1	28.4

GCFR-3
PU(TH)/TH/TH-HM RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	145.0	65.4
FINAL CORE	74.7	144.4
ANNUAL EQUILIBRIUM	22.0	26.1
30 YR CUMULATIVE	825.7	817.8
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	370.1
FINAL CORE	0.0	468.5
ANNUAL EQUILIBRIUM	0.0	215.8
30 YR CUMULATIVE	0.0	5901.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.4

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	67000.0
THERMAL EFFICIENCY	0.360

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

GCFR-3
PU(TH)/TH/TH-HM RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	115700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	115700.0	0.0
1.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
2.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
3.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
4.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
5.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
6.00	21030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21030.0	0.0
7.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
8.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
9.00	24530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24530.0	0.0
10.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
11.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
12.00	21030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21030.0	0.0
13.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
14.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
15.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
16.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
17.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
18.00	28040.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28040.0	0.0
19.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
20.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
21.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
22.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
23.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
24.00	21030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21030.0	0.0
25.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
26.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
27.00	24530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24530.0	0.0
28.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0
29.00	17520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.0	0.0

GCFR-3
PU(TH)/TH/TH-HM RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	17450.0	10.7	0.0	62.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17523.9	2.1
2.00	17380.0	10.1	0.0	129.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17520.6	6.5
3.00	17360.0	9.9	0.0	146.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17517.7	7.9
4.00	17330.0	9.9	0.0	166.8	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17508.0	9.7
5.00	17330.0	9.9	0.0	172.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17513.2	10.3
6.00	20800.0	10.6	0.0	204.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21016.3	11.8
7.00	17320.0	10.0	0.0	178.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.6	10.9
8.00	17320.0	9.9	0.0	178.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.7	11.0
9.00	24310.0	10.3	0.0	201.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24523.5	11.3
10.00	17320.0	10.0	0.0	178.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17510.1	11.0
11.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
12.00	20800.0	10.6	0.0	205.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21017.3	12.0
13.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
14.00	17320.0	10.0	0.0	178.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17510.1	11.0
15.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
16.00	17320.0	10.0	0.0	178.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17510.1	11.0
17.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
18.00	27780.0	11.0	0.0	228.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28021.2	12.3
19.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
20.00	17320.0	10.0	0.0	178.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17510.1	11.0
21.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
22.00	17320.0	10.0	0.0	178.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17510.1	11.0
23.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
24.00	20800.0	10.6	0.0	205.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21017.3	12.0
25.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
26.00	17320.0	10.0	0.0	178.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17510.1	11.0
27.00	24310.0	10.3	0.0	201.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24523.5	11.3
28.00	17320.0	10.0	0.0	178.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17510.1	11.0
29.00	17320.0	9.9	0.0	178.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17509.8	11.0
30.00	115200.0	29.7	0.0	438.8	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	115670.7	18.0

HTGR-1
LEU5(U)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	263.7	55.8
FINAL CORE	485.9	122.0
ANNUAL EQUILIBRIUM	151.8	13.1
30 YR CUMULATIVE	4686.5	523.4
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	190.9	21.1
FINAL CORE	407.5	76.5
ANNUAL EQUILIBRIUM	127.3	3.5
30 YR CUMULATIVE	3903.7	194.4
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	162.2
FINAL CORE	0.0	129.9
ANNUAL EQUILIBRIUM	0.0	42.2
30 YR CUMULATIVE	0.0	1383.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	277.0
FINAL CORE	0.0	227.5
ANNUAL EQUILIBRIUM	0.0	83.8
30 YR CUMULATIVE	0.0	2667.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1081.1	259.8
FINAL CORE	1950.5	515.0
ANNUAL EQUILIBRIUM	609.5	61.9
30 YR CUMULATIVE	18833.7	2404.1

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.07
POWER (GWE)	1.332
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	111000.0
THERMAL EFFICIENCY	0.396

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 20.27

HTGR-1
LEU5(U)
INIT. C/TH: 400 EQUIL C/TH: 450
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.1	0.0	0.0	9676.6	9676.6	0.0	0.0	9676.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.1	0.0	0.0	9676.6	9676.6	0.0	0.0	9676.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.1	0.0	0.0	9676.6	9676.6	0.0	0.0	9676.6
1.07	0.0	0.0	0.0	0.0	0.0	0.0	1068.9	0.0	0.0	8593.9	8593.9	0.0	0.0	8593.9
2.13	0.0	0.0	0.0	0.0	0.0	0.0	895.8	0.0	0.0	8595.8	8595.8	0.0	0.0	8595.8
3.20	0.0	0.0	0.0	0.0	0.0	0.0	799.2	0.0	0.0	8596.9	8596.9	0.0	0.0	8596.9
4.27	0.0	0.0	0.0	0.0	0.0	0.0	844.1	0.0	0.0	8596.4	8596.4	0.0	0.0	8596.4
5.33	0.0	0.0	0.0	0.0	0.0	0.0	873.9	0.0	0.0	8596.1	8596.1	0.0	0.0	8596.1
6.40	0.0	0.0	0.0	0.0	0.0	0.0	870.7	0.0	0.0	8596.1	8596.1	0.0	0.0	8596.1
7.47	0.0	0.0	0.0	0.0	0.0	0.0	866.8	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
8.53	0.0	0.0	0.0	0.0	0.0	0.0	866.1	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
9.60	0.0	0.0	0.0	0.0	0.0	0.0	866.6	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
10.67	0.0	0.0	0.0	0.0	0.0	0.0	866.8	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
11.73	0.0	0.0	0.0	0.0	0.0	0.0	866.8	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
12.80	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
13.87	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
14.93	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
16.00	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
17.07	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
18.13	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
19.20	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
20.27	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
21.33	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
22.40	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
23.47	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
24.53	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
25.60	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
26.67	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
27.73	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
28.80	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
29.87	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2
30.93	0.0	0.0	0.0	0.0	0.0	0.0	866.7	0.0	0.0	8596.2	8596.2	0.0	0.0	8596.2

HTGR-1
LEU5(U)
INIT. C/TH: 400 EQUIL C/TH: 450
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.07	0.0	0.0	0.0	0.0	0.0	0.0	201.8	0.0	0.0	9238.9	9238.9	60.8	92.6	9331.5
2.13	0.0	0.0	0.0	0.0	0.0	0.0	97.5	0.0	0.0	8948.0	8948.0	76.6	129.8	9077.9
3.20	0.0	0.0	0.0	0.0	0.0	0.0	48.2	0.0	0.0	8704.5	8704.5	80.1	149.5	8854.0
4.27	0.0	0.0	0.0	0.0	0.0	0.0	127.9	0.0	0.0	7290.7	7290.7	66.8	129.5	7420.1
5.33	0.0	0.0	0.0	0.0	0.0	0.0	101.0	0.0	0.0	7430.7	7430.7	60.3	119.4	7550.1
6.40	0.0	0.0	0.0	0.0	0.0	0.0	83.5	0.0	0.0	7489.4	7489.4	60.2	119.5	7608.9
7.47	0.0	0.0	0.0	0.0	0.0	0.0	85.3	0.0	0.0	7452.9	7452.9	60.1	119.4	7572.3
8.53	0.0	0.0	0.0	0.0	0.0	0.0	88.7	0.0	0.0	7432.3	7432.3	60.1	119.4	7551.7
9.60	0.0	0.0	0.0	0.0	0.0	0.0	88.9	0.0	0.0	7435.3	7435.3	60.1	119.4	7554.7
10.67	0.0	0.0	0.0	0.0	0.0	0.0	88.6	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.6
11.73	0.0	0.0	0.0	0.0	0.0	0.0	88.4	0.0	0.0	7438.6	7438.6	60.1	119.4	7558.0
12.80	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.6
13.87	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.1	7438.1	60.1	119.4	7557.5
14.93	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.1	7438.1	60.1	119.4	7557.5
16.00	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
17.07	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
18.13	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
19.20	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
20.27	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
21.33	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
22.40	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
23.47	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
24.53	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
25.60	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
26.67	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
27.73	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
28.80	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
29.87	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
30.93	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
32.00	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	0.0	7438.2	7438.2	60.1	119.4	7557.5
32.00	0.0	0.0	0.0	0.0	0.0	0.0	190.6	0.0	0.0	7694.3	7694.3	60.1	105.1	7799.4
32.00	0.0	0.0	0.0	0.0	0.0	0.0	408.3	0.0	0.0	8047.2	8047.2	53.3	79.5	8126.7

HTGR-2
MEU5(U,TH)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	29.9	28.6
FINAL CORE	12.4	11.8
ANNUAL EQUILIBRIUM	3.1	2.9
30 YR CUMULATIVE	117.9	110.4
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	336.2	78.8
FINAL CORE	570.2	144.0
ANNUAL EQUILIBRIUM	142.2	10.3
30 YR CUMULATIVE	4466.7	480.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	305.3	60.5
FINAL CORE	517.9	112.3
ANNUAL EQUILIBRIUM	129.2	5.1
30 YR CUMULATIVE	4056.8	298.6
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	67.6
FINAL CORE	0.0	108.9
ANNUAL EQUILIBRIUM	0.0	28.5
30 YR CUMULATIVE	0.0	896.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	118.6
FINAL CORE	0.0	187.7
ANNUAL EQUILIBRIUM	0.0	57.1
30 YR CUMULATIVE	0.0	1740.2
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	455.7
FINAL CORE	0.0	212.5
ANNUAL EQUILIBRIUM	0.0	63.8
30 YR CUMULATIVE	0.0	2228.2
URANIUM-235 (KG/GWE)		
INITIAL CORE	1336.3	321.3
FINAL CORE	2266.5	585.6
ANNUAL EQUILIBRIUM	567.6	45.0
30 YR CUMULATIVE	17754.5	2029.3

NUMBER OF BATCHES	4
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.332
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	129700.0
THERMAL EFFICIENCY	0.396

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

HTGR -2
MEU5(U,TH)
INIT. C/TH: 350 EQUIL C/TH: 850
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	7950.3	0.0	0.0	0.0	0.0	0.0	445.8	0.0	0.0	2251.8	2251.8	0.0	0.0	10202.2
0.0	7950.3	0.0	0.0	0.0	0.0	0.0	445.8	0.0	0.0	2251.8	2251.8	0.0	0.0	10202.2
0.0	7950.3	0.0	0.0	0.0	0.0	0.0	445.8	0.0	0.0	2251.8	2251.8	0.0	0.0	10202.2
0.0	7950.3	0.0	0.0	0.0	0.0	0.0	445.8	0.0	0.0	2251.8	2251.8	0.0	0.0	10202.2
1.00	2408.9	0.0	0.0	0.0	0.0	0.0	712.9	0.0	0.0	3600.8	3600.8	0.0	0.0	6009.7
2.00	2812.7	0.0	0.0	0.0	0.0	0.0	726.2	0.0	0.0	3667.9	3667.9	0.0	0.0	6480.6
3.00	2999.4	0.0	0.0	0.0	0.0	0.0	741.6	0.0	0.0	3745.9	3745.9	0.0	0.0	6745.3
4.00	3101.0	0.0	0.0	0.0	0.0	0.0	761.9	0.0	0.0	3848.6	3848.6	0.0	0.0	6949.5
5.00	3272.3	0.0	0.0	0.0	0.0	0.0	802.5	0.0	0.0	4053.5	4053.5	0.0	0.0	7325.8
6.00	3279.5	0.0	0.0	0.0	0.0	0.0	782.3	0.0	0.0	3951.2	3951.2	0.0	0.0	7230.7
7.00	3281.8	0.0	0.0	0.0	0.0	0.0	768.3	0.0	0.0	3880.9	3880.9	0.0	0.0	7162.7
8.00	3287.7	0.0	0.0	0.0	0.0	0.0	756.6	0.0	0.0	3821.8	3821.8	0.0	0.0	7109.5
9.00	3289.5	0.0	0.0	0.0	0.0	0.0	735.1	0.0	0.0	3713.1	3713.1	0.0	0.0	7002.6
10.00	3289.5	0.0	0.0	0.0	0.0	0.0	745.5	0.0	0.0	3765.7	3765.7	0.0	0.0	7055.2
11.00	3289.5	0.0	0.0	0.0	0.0	0.0	751.1	0.0	0.0	3794.0	3794.0	0.0	0.0	7083.5
12.00	3289.5	0.0	0.0	0.0	0.0	0.0	754.5	0.0	0.0	3811.1	3811.1	0.0	0.0	7100.6
13.00	3289.5	0.0	0.0	0.0	0.0	0.0	763.0	0.0	0.0	3853.9	3853.9	0.0	0.0	7143.4
14.00	3289.5	0.0	0.0	0.0	0.0	0.0	758.1	0.0	0.0	3829.1	3829.1	0.0	0.0	7118.7
15.00	3289.5	0.0	0.0	0.0	0.0	0.0	755.8	0.0	0.0	3817.5	3817.5	0.0	0.0	7107.0
16.00	3289.5	0.0	0.0	0.0	0.0	0.0	754.9	0.0	0.0	3812.9	3812.9	0.0	0.0	7102.4
17.00	3289.5	0.0	0.0	0.0	0.0	0.0	751.4	0.0	0.0	3795.3	3795.3	0.0	0.0	7084.8
18.00	3289.5	0.0	0.0	0.0	0.0	0.0	753.7	0.0	0.0	3807.1	3807.1	0.0	0.0	7096.6
19.00	3289.5	0.0	0.0	0.0	0.0	0.0	754.6	0.0	0.0	3811.7	3811.7	0.0	0.0	7101.3
20.00	3289.5	0.0	0.0	0.0	0.0	0.0	754.8	0.0	0.0	3812.5	3812.5	0.0	0.0	7102.3
21.00	3289.5	0.0	0.0	0.0	0.0	0.0	756.3	0.0	0.0	3820.0	3820.0	0.0	0.0	7109.5
22.00	3289.5	0.0	0.0	0.0	0.0	0.0	755.2	0.0	0.0	3814.4	3814.4	0.0	0.0	7103.9
23.00	3289.5	0.0	0.0	0.0	0.0	0.0	754.8	0.0	0.0	3812.6	3812.6	0.0	0.0	7102.1

HTGR-2
MEU5(U,TH)
INIT. C/TH: 350 EQUIL C/TH: 850
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.00	7813.9	0.0	0.0	102.3	0.0	0.0	220.3	0.0	0.0	2119.7	2119.7	19.5	28.0	9961.6
2.00	7679.4	0.0	0.0	150.7	0.0	0.0	113.3	0.0	0.0	2033.7	2033.7	23.8	39.0	9752.1
3.00	7546.3	0.0	0.0	173.1	0.0	0.0	60.9	0.0	0.0	1967.5	1967.5	24.7	45.2	9559.0
4.00	7413.7	0.0	0.0	182.7	0.0	0.0	35.4	0.0	0.0	1910.6	1910.6	24.5	49.7	9374.0
5.00	2224.2	0.0	0.0	62.3	0.0	0.0	49.0	0.0	0.0	2803.7	2803.7	35.0	72.0	5099.9
6.00	2598.5	0.0	0.0	72.8	0.0	0.0	51.2	0.0	0.0	2868.5	2868.5	36.7	74.2	5541.3
7.00	2772.5	0.0	0.0	78.2	0.0	0.0	54.2	0.0	0.0	2937.0	2937.0	38.4	76.5	5786.0
8.00	2868.4	0.0	0.0	81.3	0.0	0.0	58.5	0.0	0.0	3024.1	3024.1	39.9	78.7	5971.3
9.00	3030.5	0.0	0.0	85.7	0.0	0.0	65.7	0.0	0.0	3196.1	3196.1	41.7	82.0	6308.5
10.00	3038.1	0.0	0.0	85.6	0.0	0.0	65.6	0.0	0.0	3117.6	3117.6	40.4	79.9	6235.7
11.00	3040.1	0.0	0.0	85.3	0.0	0.0	64.3	0.0	0.0	3061.9	3061.9	39.4	78.5	6180.5
12.00	3044.9	0.0	0.0	85.2	0.0	0.0	62.2	0.0	0.0	3014.0	3014.0	38.7	77.3	6136.2
13.00	3045.8	0.0	0.0	85.2	0.0	0.0	59.2	0.0	0.0	2926.8	2926.8	37.9	75.6	6048.2
14.00	3045.5	0.0	0.0	85.3	0.0	0.0	59.5	0.0	0.0	2967.6	2967.6	38.5	76.6	6089.8
15.00	3045.6	0.0	0.0	85.4	0.0	0.0	60.1	0.0	0.0	2990.2	2990.2	38.8	77.2	6113.0
16.00	3045.9	0.0	0.0	85.5	0.0	0.0	60.8	0.0	0.0	3004.2	3004.2	39.0	77.6	6127.7
17.00	3046.3	0.0	0.0	85.5	0.0	0.0	62.0	0.0	0.0	3038.6	3038.6	39.4	78.2	6163.0
18.00	3046.3	0.0	0.0	85.5	0.0	0.0	61.8	0.0	0.0	3019.3	3019.3	39.1	77.7	6143.3
19.00	3046.3	0.0	0.0	85.4	0.0	0.0	61.5	0.0	0.0	3010.0	3010.0	39.0	77.5	6133.7
20.00	3046.1	0.0	0.0	85.4	0.0	0.0	61.3	0.0	0.0	3006.1	3006.1	38.9	77.4	6129.7
21.00	3046.0	0.0	0.0	85.4	0.0	0.0	60.8	0.0	0.0	2992.0	2992.0	38.8	77.2	6115.2
22.00	3046.0	0.0	0.0	85.4	0.0	0.0	60.9	0.0	0.0	3001.3	3001.3	38.9	77.4	6124.6
23.00	3046.0	0.0	0.0	85.4	0.0	0.0	61.0	0.0	0.0	3005.0	3005.0	39.0	77.5	6128.5
24.00	3046.1	0.0	0.0	85.4	0.0	0.0	61.1	0.0	0.0	3005.7	3005.7	39.0	77.5	6129.2
24.00	3105.4	0.0	0.0	81.1	0.0	0.0	112.5	0.0	0.0	3129.4	3129.4	39.1	70.5	6305.2
24.00	3165.7	0.0	0.0	70.6	0.0	0.0	210.5	0.0	0.0	3275.8	3275.8	37.7	61.0	6502.4
24.00	3227.0	0.0	0.0	47.6	0.0	0.0	398.0	0.0	0.0	3486.3	3486.3	31.3	44.3	6757.7

HTGR-3
MEU5(U,TH)-FS

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	29.9	28.6
FINAL CORE	16.1	15.4
ANNUAL EQUILIBRIUM	4.0	3.7
30 YR CUMULATIVE	148.7	138.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	246.3	52.3
FINAL CORE	517.1	126.5
ANNUAL EQUILIBRIUM	129.2	5.5
30 YR CUMULATIVE	4056.0	312.9
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	223.6	39.6
FINAL CORE	469.6	98.8
ANNUAL EQUILIBRIUM	117.3	1.6
30 YR CUMULATIVE	3683.6	177.1
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	35.3
FINAL CORE	0.0	72.1
ANNUAL EQUILIBRIUM	0.0	19.5
30 YR CUMULATIVE	0.0	603.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	66.1
FINAL CORE	0.0	129.9
ANNUAL EQUILIBRIUM	0.0	43.5
30 YR CUMULATIVE	0.0	1294.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	428.7
FINAL CORE	0.0	250.8
ANNUAL EQUILIBRIUM	0.0	76.6
30 YR CUMULATIVE	0.0	2632.1
URANIUM-235 (KG/GWE)		
INITIAL CORE	979.0	214.0
FINAL CORE	2055.6	515.0
ANNUAL EQUILIBRIUM	512.0	25.5
30 YR CUMULATIVE	16122.4	1358.9

NUMBER OF BATCHES	8
REFUELING INTERVAL (YRS)	0.50
POWER (GWE)	1.332
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	118900.0
THERMAL EFFICIENCY	0.396

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.50

HTGR -3
MEU5(U,TH)-FS
INIT. C/TH: 350 EQUIL C/TH: 650
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.0	3975.2	0.0	0.0	0.0	0.0	0.0	163.7	0.0	0.0	827.1	827.1	0.0	0.0	4802.3
0.50	2140.5	0.0	0.0	0.0	0.0	0.0	320.1	0.0	0.0	1616.7	1616.7	0.0	0.0	3757.1
1.00	2140.5	0.0	0.0	0.0	0.0	0.0	321.8	0.0	0.0	1625.4	1625.4	0.0	0.0	3765.9
1.50	2140.5	0.0	0.0	0.0	0.0	0.0	329.6	0.0	0.0	1664.9	1664.9	0.0	0.0	3805.4
2.00	2140.5	0.0	0.0	0.0	0.0	0.0	336.6	0.0	0.0	1700.4	1700.4	0.0	0.0	3840.9
2.50	2140.5	0.0	0.0	0.0	0.0	0.0	343.0	0.0	0.0	1732.3	1732.3	0.0	0.0	3872.8
3.00	2140.5	0.0	0.0	0.0	0.0	0.0	349.0	0.0	0.0	1763.1	1763.1	0.0	0.0	3903.5
3.50	2140.5	0.0	0.0	0.0	0.0	0.0	355.3	0.0	0.0	1794.4	1794.4	0.0	0.0	3934.9
4.00	2140.5	0.0	0.0	0.0	0.0	0.0	361.8	0.0	0.0	1827.4	1827.4	0.0	0.0	3967.9
4.50	2140.5	0.0	0.0	0.0	0.0	0.0	347.9	0.0	0.0	1757.3	1757.3	0.0	0.0	3897.7
5.00	2140.5	0.0	0.0	0.0	0.0	0.0	348.5	0.0	0.0	1760.2	1760.2	0.0	0.0	3900.7
5.50	2140.5	0.0	0.0	0.0	0.0	0.0	346.7	0.0	0.0	1751.1	1751.1	0.0	0.0	3891.6
6.00	2140.5	0.0	0.0	0.0	0.0	0.0	344.9	0.0	0.0	1742.3	1742.3	0.0	0.0	3882.7
6.50	2140.5	0.0	0.0	0.0	0.0	0.0	343.2	0.0	0.0	1733.5	1733.5	0.0	0.0	3874.0
7.00	2140.5	0.0	0.0	0.0	0.0	0.0	341.3	0.0	0.0	1724.1	1724.1	0.0	0.0	3864.6
7.50	2140.5	0.0	0.0	0.0	0.0	0.0	339.2	0.0	0.0	1713.5	1713.5	0.0	0.0	3853.9
8.00	2140.5	0.0	0.0	0.0	0.0	0.0	336.8	0.0	0.0	1701.3	1701.3	0.0	0.0	3841.7
8.50	2140.5	0.0	0.0	0.0	0.0	0.0	341.7	0.0	0.0	1726.0	1726.0	0.0	0.0	3866.5
9.00	2140.5	0.0	0.0	0.0	0.0	0.0	341.4	0.0	0.0	1724.6	1724.6	0.0	0.0	3865.0
9.50	2140.5	0.0	0.0	0.0	0.0	0.0	341.9	0.0	0.0	1727.1	1727.1	0.0	0.0	3867.5
10.00	2140.5	0.0	0.0	0.0	0.0	0.0	342.4	0.0	0.0	1729.3	1729.3	0.0	0.0	3869.8
10.50	2140.5	0.0	0.0	0.0	0.0	0.0	342.8	0.0	0.0	1731.6	1731.6	0.0	0.0	3872.0
11.00	2140.5	0.0	0.0	0.0	0.0	0.0	343.3	0.0	0.0	1734.3	1734.3	0.0	0.0	3874.8
11.50	2140.5	0.0	0.0	0.0	0.0	0.0	344.0	0.0	0.0	1737.8	1737.8	0.0	0.0	3878.2
12.00	2140.5	0.0	0.0	0.0	0.0	0.0	344.9	0.0	0.0	1742.3	1742.3	0.0	0.0	3882.8

HTGR-3
MEU5(U,TH)-FS
INIT. C/TH: 350 EQUIL C/TH: 650
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.50	3934.5	0.0	0.0	34.6	0.0	0.0	101.4	0.0	0.0	801.9	801.9	4.3	5.8	4742.3
1.00	3894.8	0.0	0.0	55.7	0.0	0.0	64.3	0.0	0.0	785.2	785.2	5.6	8.7	4688.6
1.50	3855.9	0.0	0.0	68.6	0.0	0.0	41.3	0.0	0.0	772.6	772.6	6.3	10.5	4639.0
2.00	3817.7	0.0	0.0	76.5	0.0	0.0	27.9	0.0	0.0	762.4	762.4	6.6	11.9	4592.0
2.50	3780.2	0.0	0.0	81.5	0.0	0.0	19.4	0.0	0.0	753.6	753.6	6.8	13.0	4546.9
3.00	3743.3	0.0	0.0	84.6	0.0	0.0	14.1	0.0	0.0	745.7	745.7	6.9	14.0	4503.0
3.50	3706.9	0.0	0.0	86.5	0.0	0.0	10.9	0.0	0.0	738.2	738.2	7.0	14.9	4460.0
4.00	3671.0	0.0	0.0	87.7	0.0	0.0	9.1	0.0	0.0	730.9	730.9	7.1	15.7	4417.7
4.50	1966.0	0.0	0.0	51.0	0.0	0.0	13.2	0.0	0.0	1291.4	1291.4	12.4	27.7	3285.0
5.00	1967.1	0.0	0.0	51.2	0.0	0.0	13.9	0.0	0.0	1299.3	1299.3	12.6	27.9	3294.3
5.50	1968.1	0.0	0.0	51.4	0.0	0.0	14.9	0.0	0.0	1331.0	1331.0	12.9	28.5	3327.6
6.00	1968.8	0.0	0.0	51.6	0.0	0.0	15.7	0.0	0.0	1359.5	1359.5	13.2	29.1	3357.4
6.50	1969.5	0.0	0.0	51.7	0.0	0.0	16.5	0.0	0.0	1385.2	1385.2	13.5	29.5	3384.2
7.00	1970.0	0.0	0.0	51.8	0.0	0.0	17.1	0.0	0.0	1409.8	1409.8	13.7	29.9	3409.7
7.50	1970.3	0.0	0.0	51.8	0.0	0.0	17.7	0.0	0.0	1434.7	1434.7	13.8	30.3	3435.4
8.00	1970.6	0.0	0.0	51.8	0.0	0.0	18.2	0.0	0.0	1460.9	1460.9	14.0	30.7	3462.2
8.50	1970.7	0.0	0.0	51.7	0.0	0.0	17.7	0.0	0.0	1406.0	1406.0	13.5	29.8	3406.5
9.00	1970.8	0.0	0.0	51.7	0.0	0.0	17.7	0.0	0.0	1408.3	1408.3	13.5	29.8	3408.9
9.50	1970.7	0.0	0.0	51.6	0.0	0.0	17.6	0.0	0.0	1401.1	1401.1	13.4	29.6	3401.4
10.00	1970.5	0.0	0.0	51.6	0.0	0.0	17.4	0.0	0.0	1394.0	1394.0	13.4	29.5	3394.0
10.50	1970.4	0.0	0.0	51.6	0.0	0.0	17.3	0.0	0.0	1387.0	1387.0	13.3	29.3	3386.7
11.00	1970.2	0.0	0.0	51.5	0.0	0.0	17.1	0.0	0.0	1379.4	1379.4	13.2	29.2	3378.8
11.50	1970.0	0.0	0.0	51.5	0.0	0.0	16.9	0.0	0.0	1370.9	1370.9	13.2	29.1	3370.0
12.00	1969.9	0.0	0.0	51.5	0.0	0.0	16.7	0.0	0.0	1361.3	1361.3	13.1	28.9	3360.1
12.50	1969.8	0.0	0.0	51.6	0.0	0.0	16.9	0.0	0.0	1380.6	1380.6	13.3	29.3	3379.8
12.50	1990.4	0.0	0.0	51.0	0.0	0.0	23.5	0.0	0.0	1400.5	1400.5	13.3	27.8	3418.8
12.50	2011.3	0.0	0.0	50.0	0.0	0.0	33.6	0.0	0.0	1425.8	1425.8	13.3	26.3	3463.4
12.50	2032.3	0.0	0.0	48.1	0.0	0.0	48.8	0.0	0.0	1454.4	1454.4	13.2	24.6	3511.3
12.50	2053.5	0.0	0.0	45.0	0.0	0.0	71.6	0.0	0.0	1488.1	1488.1	13.0	22.6	3564.2
12.50	2075.0	0.0	0.0	39.9	0.0	0.0	105.8	0.0	0.0	1529.5	1529.5	12.5	20.2	3624.7
12.50	2096.6	0.0	0.0	31.8	0.0	0.0	156.9	0.0	0.0	1582.6	1582.6	11.3	16.8	3696.0
12.50	2118.5	0.0	0.0	19.2	0.0	0.0	233.0	0.0	0.0	1652.7	1652.7	8.6	11.2	3782.4

HTGR -4
MEU5 (U,TH) -RU5

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	35.4	34.4
FINAL CORE	28.2	27.4
ANNUAL EQUILIBRIUM	8.8	8.4
30 YR CUMULATIVE	288.7	277.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	444.9	173.0
FINAL CORE	634.2	292.6
ANNUAL EQUILIBRIUM	198.2	57.2
30 YR CUMULATIVE	6213.0	1944.9
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	404.0	143.2
FINAL CORE	576.0	247.7
ANNUAL EQUILIBRIUM	180.0	45.0
30 YR CUMULATIVE	5643.1	1555.6
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	111.9
FINAL CORE	0.0	162.2
ANNUAL EQUILIBRIUM	0.0	57.8
30 YR CUMULATIVE	0.0	1768.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	160.3
FINAL CORE	0.0	223.7
ANNUAL EQUILIBRIUM	0.0	85.3
30 YR CUMULATIVE	0.0	2590.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	499.1
FINAL CORE	0.0	410.4
ANNUAL EQUILIBRIUM	0.0	165.3
30 YR CUMULATIVE	0.0	5135.3
URANIUM-235 (KG/GWE)		
INITIAL CORE	1768.2	695.9
FINAL CORE	2520.8	1173.6
ANNUAL EQUILIBRIUM	787.7	231.6
30 YR CUMULATIVE	24696.0	7860.2
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.07
POWER (GWE)		1.332
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		62750.0
THERMAL EFFICIENCY		0.396

HTGR-4
MEU5(U,TH)-RU5
INIT. C/TH: 290 EQUIL C/TH: 365
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	12557.5	0.0	0.0	0.0	0.0	0.0	785.1	0.0	0.0	3965.8	3965.8	0.0	0.0	16523.3
0.0	12557.5	0.0	0.0	0.0	0.0	0.0	785.1	0.0	0.0	3965.8	3965.8	0.0	0.0	16523.3
0.0	12557.5	0.0	0.0	0.0	0.0	0.0	785.1	0.0	0.0	3965.8	3965.8	0.0	0.0	16523.3
1.07	8727.4	0.0	0.0	0.0	0.0	0.0	1224.2	0.0	0.0	6183.5	6183.5	0.0	0.0	14910.8
2.13	9300.4	0.0	0.0	0.0	0.0	0.0	1176.7	0.0	0.0	5943.8	5943.8	0.0	0.0	15244.2
3.20	9695.0	0.0	0.0	0.0	0.0	0.0	1145.0	0.0	0.0	5775.0	5775.0	0.0	0.0	15472.0
4.27	10154.6	0.0	0.0	0.0	0.0	0.0	1106.0	0.0	0.0	5586.4	5586.4	0.0	0.0	15741.0
5.33	10027.0	0.0	0.0	0.0	0.0	0.0	1116.6	0.0	0.0	5639.8	5639.8	0.0	0.0	15666.8
6.40	9978.7	0.0	0.0	0.0	0.0	0.0	1120.6	0.0	0.0	5660.0	5660.0	0.0	0.0	15638.8
7.47	9993.2	0.0	0.0	0.0	0.0	0.0	1119.4	0.0	0.0	5653.9	5653.9	0.0	0.0	15647.2
8.53	9993.6	0.0	0.0	0.0	0.0	0.0	1119.3	0.0	0.0	5653.8	5653.8	0.0	0.0	15647.4
9.60	9995.5	0.0	0.0	0.0	0.0	0.0	1119.5	0.0	0.0	5654.0	5654.0	0.0	0.0	15648.5
10.67	9994.7	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.3	5653.3	0.0	0.0	15648.0
11.73	9994.6	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.4	5653.4	0.0	0.0	15648.0
12.80	9994.3	0.0	0.0	0.0	0.0	0.0	1119.3	0.0	0.0	5653.5	5653.5	0.0	0.0	15647.8
13.87	9994.4	0.0	0.0	0.0	0.0	0.0	1119.3	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
14.93	9994.5	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
16.00	9994.5	0.0	0.0	0.0	0.0	0.0	1119.3	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
17.07	9994.7	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.3	5653.3	0.0	0.0	15648.0
18.13	9994.5	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
19.20	9994.5	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
20.27	9994.5	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
21.33	9994.4	0.0	0.0	0.0	0.0	0.0	1119.3	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
22.40	9994.4	0.0	0.0	0.0	0.0	0.0	1119.3	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
23.47	9994.4	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
24.53	9994.5	0.0	0.0	0.0	0.0	0.0	1119.2	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9
25.60	9994.5	0.0	0.0	0.0	0.0	0.0	1119.3	0.0	0.0	5653.4	5653.4	0.0	0.0	15647.9

HTGR -4
MEU5(U,TH)-RU5
INIT. C/TH: 290 EQUIL C/TH: 365
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.07	12365.5	150.4	150.4	0.0	0.5	0.5	454.2	158.7	158.7	3604.4	3763.1	38.3	50.6	16179.2
2.13	12183.7	232.7	232.7	0.0	2.2	2.2	282.4	255.2	255.2	3372.4	3627.6	52.0	74.0	15885.4
3.20	12009.2	281.7	281.7	0.0	5.0	5.0	182.6	320.4	320.4	3200.4	3520.8	58.7	88.9	15616.9
4.27	8332.1	211.1	211.1	0.0	3.5	3.5	327.1	238.3	238.3	5074.9	5313.2	87.1	129.1	13774.4
5.33	8890.2	222.3	222.3	0.0	3.5	3.5	355.8	250.2	250.2	4915.4	5165.6	85.5	126.2	14162.1
6.40	9272.5	229.5	229.5	0.0	3.5	3.5	334.5	257.0	257.0	4765.5	5022.5	83.5	123.5	14414.0
7.47	9716.7	237.9	237.9	0.0	3.7	3.7	322.2	267.6	267.6	4602.3	4869.9	81.4	120.1	14706.8
8.53	9593.5	235.5	235.5	0.0	3.7	3.7	324.5	264.9	264.9	4646.5	4911.4	81.9	121.0	14629.9
9.60	9546.9	234.6	234.6	0.0	3.6	3.6	325.5	263.9	263.9	4663.4	4927.3	82.2	121.3	14595.4
10.67	9560.8	234.8	234.8	0.0	3.7	3.7	325.3	264.2	264.2	4658.4	4922.6	82.1	121.2	14604.7
11.73	9561.2	234.8	234.8	0.0	3.7	3.7	325.3	264.2	264.2	4658.3	4922.5	82.1	121.2	14604.9
12.80	9563.5	234.5	234.5	0.0	3.7	3.7	325.3	265.2	265.2	4657.3	4922.5	82.5	121.5	14602.9
13.87	9562.2	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4657.9	4922.1	82.1	121.2	14605.6
14.93	9562.2	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4657.9	4922.1	82.1	121.2	14605.5
16.00	9562.2	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.3
17.07	9562.0	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.4
18.13	9562.1	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.5
19.20	9562.0	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.4
20.27	9562.2	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4657.9	4922.1	82.1	121.2	14605.6
21.33	9562.1	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.5
22.40	9562.1	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.5
23.47	9562.1	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.5
24.53	9562.0	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.4
25.60	9562.2	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4657.9	4922.1	82.1	121.2	14605.6
26.67	9562.0	234.9	234.9	0.0	3.7	3.7	325.3	264.2	264.2	4658.0	4922.2	82.1	121.2	14605.4
26.67	9704.5	192.0	192.0	0.0	1.5	1.5	491.1	208.2	208.2	4910.8	5119.0	76.1	104.2	14927.8
26.67	9848.6	119.7	119.7	0.0	0.3	0.3	741.4	125.3	125.3	5231.6	5356.9	57.9	72.6	15278.1

HTGR-5
MEU5(U,TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	29.9	28.6
FINAL CORE	20.9	20.1
ANNUAL EQUILIBRIUM	4.9	4.6
30 YR CUMULATIVE	164.9	155.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	324.0	66.6
FINAL CORE	449.3	137.0
ANNUAL EQUILIBRIUM	105.2	12.8
30 YR CUMULATIVE	3462.9	497.7
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	294.2	49.8
FINAL CORE	397.7	103.3
ANNUAL EQUILIBRIUM	93.1	6.8
30 YR CUMULATIVE	3080.2	307.3
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	53.4
FINAL CORE	0.0	105.3
ANNUAL EQUILIBRIUM	0.0	27.3
30 YR CUMULATIVE	0.0	815.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	97.8
FINAL CORE	0.0	175.4
ANNUAL EQUILIBRIUM	0.0	51.9
30 YR CUMULATIVE	0.0	1531.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	459.8
FINAL CORE	424.6	464.0
ANNUAL EQUILIBRIUM	99.6	107.9
30 YR CUMULATIVE	2667.5	3418.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	1287.7	272.8
FINAL CORE	1791.5	559.5
ANNUAL EQUILIBRIUM	417.7	54.8
30 YR CUMULATIVE	13798.2	2101.2
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.07
POWER (GWE)		1.332
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		96000.0
THERMAL EFFICIENCY		0.396

HTGR-5
MEU5(U,TH)-RUF
INIT. C/TH: 350 EQUIL C/TH: 500
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	7949.6	0.0	0.0	0.0	0.0	0.0	428.8	0.0	0.0	2165.9	2165.9	0.0	0.0	10115.5
0.0	7949.6	0.0	0.0	0.0	0.0	0.0	428.8	0.0	0.0	2165.9	2165.9	0.0	0.0	10115.5
0.0	7949.6	0.0	0.0	0.0	0.0	0.0	428.8	0.0	0.0	2165.9	2165.9	0.0	0.0	10115.5
0.0	7949.6	0.0	0.0	0.0	0.0	0.0	428.8	0.0	0.0	2165.9	2165.9	0.0	0.0	10115.5
1.07	3091.8	0.0	0.0	0.0	0.0	0.0	713.3	0.0	0.0	3602.8	3602.8	0.0	0.0	6694.6
2.13	3478.3	108.4	108.4	0.0	124.9	124.9	470.9	1366.8	1366.8	2378.3	2378.3	0.0	0.0	7223.3
3.20	3975.2	152.5	152.5	0.0	62.7	62.7	518.3	1356.2	1356.2	2618.2	3974.3	0.0	0.0	7949.5
4.27	4637.7	171.7	171.7	0.0	36.1	36.1	573.2	1421.1	1421.1	2895.1	4316.2	0.0	0.0	8953.9
5.33	5059.3	179.8	179.8	0.0	23.0	23.0	615.2	1424.1	1424.1	3107.6	4531.7	0.0	0.0	9591.0
6.40	5565.2	78.1	78.1	0.0	10.8	10.8	754.6	627.5	627.5	3811.6	4439.1	0.0	0.0	10004.4
7.47	5565.2	89.2	89.2	0.0	13.3	13.3	695.9	723.7	723.7	3514.9	4238.6	0.0	0.0	9803.8
8.53	5565.2	103.5	103.5	0.0	17.3	17.3	617.8	846.4	846.4	3120.5	3966.9	0.0	0.0	9532.1
9.60	5565.2	121.1	121.1	0.0	23.3	23.3	564.6	1002.2	1002.2	2851.8	3854.0	0.0	0.0	9419.3
10.67	5565.2	131.5	131.5	0.0	28.9	28.9	553.4	1105.7	1105.7	2795.4	3901.1	0.0	0.0	9466.4
11.73	5565.2	142.3	142.3	0.0	31.1	31.1	548.3	1120.5	1120.5	2769.5	3890.0	0.0	0.0	9455.2
12.80	5565.2	141.2	141.2	0.0	33.5	33.5	570.3	1200.8	1200.8	2880.6	4081.4	0.0	0.0	9646.6
13.87	5565.2	140.4	140.4	0.0	32.5	32.5	579.4	1197.3	1197.3	2926.2	4123.5	0.0	0.0	9688.8
14.93	5565.2	140.2	140.2	0.0	31.6	31.6	576.4	1195.4	1195.4	2911.9	4107.4	0.0	0.0	9672.6
16.00	5565.2	140.6	140.6	0.0	31.1	31.1	580.0	1195.6	1195.6	2929.4	4125.0	0.0	0.0	9690.2
17.07	5565.2	141.0	141.0	0.0	31.3	31.3	564.8	1195.9	1195.9	2852.9	4048.8	0.0	0.0	9614.1
18.13	5565.2	141.5	141.5	0.0	31.8	31.8	561.6	1198.3	1198.3	2836.3	4034.6	0.0	0.0	9599.9
19.20	5565.2	141.6	141.6	0.0	32.4	32.4	562.7	1199.2	1199.2	2842.4	4041.6	0.0	0.0	9606.9
20.27	5565.2	141.5	141.5	0.0	32.6	32.6	560.8	1199.3	1199.3	2832.4	4031.8	0.0	0.0	9597.0
21.33	5565.2	141.3	141.3	0.0	32.7	32.7	566.3	1199.4	1199.4	2860.6	4059.9	0.0	0.0	9625.2
22.40	5565.2	141.2	141.2	0.0	32.5	32.5	566.3	1198.5	1198.5	2860.6	4059.1	0.0	0.0	9624.3

HTGR-5
MEU5(U,TH)-RUF
INIT. C/TH: 350 EQUIL C/TH: 500
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.07	7799.0	108.4	108.4	0.0	124.9	124.9	66.8	1366.8	1366.8	671.2	2038.0	15.4	22.9	9859.8
2.13	7659.9	152.5	152.5	0.0	62.7	62.7	31.2	1356.2	1356.2	609.4	1965.6	18.1	31.0	9656.5
3.20	7522.9	171.7	171.7	0.0	36.1	36.1	12.8	1421.1	1421.1	491.3	1912.4	18.7	36.1	9471.4
4.27	7388.4	179.8	179.8	0.0	23.0	23.0	5.9	1424.1	1424.1	444.3	1868.4	18.9	40.3	9297.1
5.33	2854.7	78.1	78.1	0.0	10.8	10.8	33.0	627.5	627.5	2241.5	2869.0	29.2	61.2	5784.9
6.40	3217.1	89.2	89.2	5.4	13.3	13.3	30.9	723.7	723.7	2288.9	3012.6	32.5	65.9	6295.7
7.47	3686.6	103.5	103.5	8.9	17.3	17.3	35.2	846.4	846.4	2378.3	3224.7	36.5	71.4	6982.7
8.53	4315.3	121.1	121.1	11.9	23.3	23.3	42.9	1002.2	1002.2	2539.2	3541.4	40.8	77.6	7934.3
9.60	4720.4	131.5	131.5	14.5	28.9	28.9	51.4	1105.7	1105.7	2637.0	3742.7	42.7	80.5	8543.6
10.67	5202.3	142.3	142.3	6.8	31.1	31.1	63.4	1120.5	1120.5	2556.6	3677.1	41.4	77.7	8957.2
11.73	5203.0	141.2	141.2	7.8	33.5	33.5	55.5	1200.8	1200.8	2316.7	3517.4	39.2	74.5	8794.8
12.80	5200.8	140.4	140.4	8.7	32.5	32.5	46.1	1197.3	1197.3	2099.2	3296.6	36.8	70.5	8567.9
13.87	5198.5	140.2	140.2	9.9	31.6	31.6	40.3	1195.4	1195.4	2009.4	3204.8	36.0	69.3	8472.6
14.93	5197.5	140.6	140.6	10.5	31.1	31.1	39.5	1195.6	1195.6	2047.4	3243.0	36.7	70.3	8510.7
16.00	5197.8	141.0	141.0	11.5	31.3	31.3	39.8	1195.9	1195.9	2030.6	3226.5	36.8	70.3	8494.7
17.07	5199.3	141.5	141.5	11.6	31.8	31.8	43.2	1198.3	1198.3	2194.1	3392.4	38.6	73.4	8665.1
18.13	5200.5	141.6	141.6	11.8	32.4	32.4	44.8	1199.2	1199.2	2229.9	3429.1	39.0	74.0	8703.6
19.20	5201.1	141.5	141.5	11.9	32.6	32.6	44.8	1199.3	1199.3	2218.1	3417.5	38.8	73.7	8692.3
20.27	5201.2	141.3	141.3	12.0	32.7	32.7	45.2	1199.4	1199.4	2232.4	3431.8	38.8	73.8	8706.8
21.33	5200.8	141.2	141.2	11.9	32.5	32.5	43.3	1198.5	1198.5	2170.7	3369.3	38.1	72.7	8642.7
22.40	5200.3	141.1	141.1	11.9	32.3	32.3	42.7	1198.2	1198.2	2158.6	3356.8	38.0	72.5	8629.6
23.47	5200.1	141.1	141.1	11.8	32.2	32.2	42.8	1198.1	1198.1	2163.6	3361.8	38.1	72.6	8634.4
23.47	5289.2	141.1	141.1	21.9	51.1	51.1	69.1	1220.1	1220.1	2238.7	3458.7	37.6	65.3	8813.3
23.47	5379.9	111.9	111.9	40.8	86.0	86.0	116.8	1245.0	1245.0	2370.6	3615.7	35.8	56.0	9051.6
23.47	5471.9	73.3	73.3	75.9	148.7	148.7	197.8	1274.2	1274.2	2521.6	3795.8	28.8	39.6	9307.3

HTGR-6
MEU5(U,TH)-RUF,FS

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	37.9	36.3
FINAL CORE	20.9	20.0
ANNUAL EQUILIBRIUM	5.2	4.8
30 YR CUMULATIVE	188.3	176.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	392.1	92.1
FINAL CORE	399.3	123.8
ANNUAL EQUILIBRIUM	99.9	9.2
30 YR CUMULATIVE	3310.6	437.2
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	356.1	83.5
FINAL CORE	363.8	100.8
ANNUAL EQUILIBRIUM	91.1	5.2
30 YR CUMULATIVE	3018.4	307.9
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	67.3
FINAL CORE	0.0	87.2
ANNUAL EQUILIBRIUM	0.0	24.6
30 YR CUMULATIVE	0.0	767.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	121.2
FINAL CORE	0.0	149.2
ANNUAL EQUILIBRIUM	0.0	50.2
30 YR CUMULATIVE	0.0	1521.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	568.9
FINAL CORE	411.4	434.0
ANNUAL EQUILIBRIUM	103.0	108.9
30 YR CUMULATIVE	3072.1	3703.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1558.6	366.2
FINAL CORE	1586.6	500.1
ANNUAL EQUILIBRIUM	395.0	39.2
30 YR CUMULATIVE	13153.5	1811.6
NUMBER OF BATCHES		8
REFUEL TIME (YRS)		0.50
POWER (GWE)		1.332
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		100000.0
THERMAL EFFICIENCY		0.396

HTGR -6
MEU5(U,TH)-RUF,FS
INIT. C/TH: 275 EQUIL C/TH: 500
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
0.0	5040.2	0.0	0.0	0.0	0.0	0.0	259.5	0.0	0.0	1310.8	1310.8	0.0	0.0	6351.0
1.00	1806.0	0.0	0.0	0.0	0.0	0.0	288.1	0.0	0.0	1455.2	1455.2	0.0	0.0	3261.3
1.50	1851.0	59.1	59.1	0.0	103.6	103.6	99.8	924.2	924.2	504.1	1428.3	0.0	0.0	3279.5
2.00	1952.8	77.5	77.5	0.0	75.8	75.8	115.9	908.8	908.8	585.1	1493.9	0.0	0.0	3446.7
2.50	2110.8	90.4	90.4	0.0	58.1	58.1	133.7	937.8	937.8	675.1	612.9	0.0	0.0	3723.7
3.00	2359.1	99.1	99.1	0.0	41.8	41.8	156.3	917.8	917.8	789.7	707.5	0.0	0.0	4066.7
3.50	2772.1	104.6	104.6	0.0	30.2	30.2	183.4	899.0	899.0	926.4	825.4	0.0	0.0	4597.5
4.00	2772.1	107.8	107.8	0.0	22.2	22.2	187.1	882.0	882.0	945.2	827.2	0.0	0.0	4599.3
4.50	2772.1	109.5	109.5	0.0	16.9	16.9	191.4	867.8	867.8	966.6	834.4	0.0	0.0	4606.5
5.00	2772.1	110.0	110.0	0.0	13.5	13.5	261.7	855.1	855.1	1322.1	177.3	0.0	0.0	4949.4
5.50	2772.1	44.1	44.1	0.0	6.0	6.0	352.9	346.0	346.0	1782.5	128.4	0.0	0.0	4900.5
6.00	2772.1	45.4	45.4	0.0	5.9	5.9	341.8	353.5	353.5	1726.7	80.2	0.0	0.0	4852.3
6.50	2772.1	48.2	48.2	0.0	6.1	6.1	321.6	374.7	374.7	1624.1	998.8	0.0	0.0	4770.9
7.00	2772.1	52.5	52.5	0.0	6.7	6.7	297.7	408.1	408.1	1503.5	1911.6	0.0	0.0	4683.7
7.50	2772.1	58.9	58.9	0.0	7.8	7.8	263.5	466.7	466.7	1330.5	1797.2	0.0	0.0	4569.3
8.00	2772.1	68.8	68.8	0.0	10.0	10.0	253.2	579.3	579.3	1278.6	1857.9	0.0	0.0	4630.0
8.50	2772.1	69.3	69.3	0.0	10.1	10.1	253.1	552.2	552.2	1278.6	1830.8	0.0	0.0	4602.9
9.00	2772.1	69.6	69.6	0.0	10.7	10.7	224.1	553.2	553.2	1132.2	1685.3	0.0	0.0	4457.4
9.50	2772.1	69.7	69.7	0.0	11.4	11.4	233.8	556.2	556.2	1181.0	1737.2	0.0	0.0	4509.3
10.00	2772.1	69.4	69.4	0.0	12.0	12.0	237.6	556.4	556.4	1200.4	1756.8	0.0	0.0	4528.9
10.50	2772.1	69.1	69.1	0.0	12.2	12.2	243.5	556.1	556.1	1229.8	1785.9	0.0	0.0	4558.0
11.00	2772.1	68.7	68.7	0.0	12.2	12.2	249.4	555.3	555.3	1259.5	1814.8	0.0	0.0	4586.9
11.50	2772.1	68.4	68.4	0.0	12.0	12.0	257.2	554.3	554.3	1301.3	1855.6	0.0	0.0	4627.7
12.00	2772.1	68.2	68.2	0.0	11.8	11.8	251.8	553.1	553.1	1272.0	1825.1	0.0	0.0	4597.2
12.50	2772.1	68.1	68.1	0.0	11.6	11.6	253.5	553.2	553.2	1280.5	1833.7	0.0	0.0	4605.8
13.00	2772.1	68.0	68.0	0.0	11.3	11.3	265.7	552.6	552.6	1342.1	1894.7	0.0	0.0	4666.8
13.50	2772.1	68.0	68.0	0.0	11.1	11.1	261.9	551.3	551.3	1323.1	1874.4	0.0	0.0	4646.5
14.00	2772.1	68.0	68.0	0.0	11.0	11.0	260.8	551.6	551.6	1317.2	1868.9	0.0	0.0	4641.0
14.50	2772.1	68.2	68.2	0.0	10.9	10.9	258.7	551.8	551.8	1306.5	1858.3	0.0	0.0	4630.4
15.00	2772.1	68.3	68.3	0.0	10.9	10.9	256.5	552.1	552.1	1295.3	1847.4	0.0	0.0	4619.5
15.50	2772.1	68.4	68.4	0.0	10.0	10.0	254.0	552.5	552.5	1278.1	1830.6	0.0	0.0	4602.6
16.00	2772.1	68.5	68.5	0.0	11.1	11.1	255.8	552.9	552.9	1292.0	1844.9	0.0	0.0	4617.0
16.50	2772.1	68.5	68.5	0.0	11.2	11.2	255.8	552.9	552.9	1292.0	1844.8	0.0	0.0	4616.9
17.00	2772.1	68.6	68.6	0.0	11.3	11.3	249.7	553.1	553.1	1261.6	1814.6	0.0	0.0	4586.7
17.50	2772.1	68.6	68.6	0.0	11.3	11.3	251.8	553.6	553.6	1271.5	1825.0	0.0	0.0	4597.1
18.00	2772.1	68.6	68.6	0.0	11.4	11.4	251.7	553.5	553.5	1271.5	1824.9	0.0	0.0	4597.0
18.50	2772.1	68.5	68.5	0.0	11.4	11.4	253.1	553.4	553.4	1278.5	1831.9	0.0	0.0	4604.0
19.00	2772.1	68.5	68.5	0.0	11.4	11.4	253.1	553.3	553.3	1278.5	1831.8	0.0	0.0	4603.9
19.50	2772.1	68.4	68.4	0.0	11.4	11.4	255.5	553.2	553.2	1290.4	1843.6	0.0	0.0	4615.7
20.00	2772.1	68.4	68.4	0.0	11.4	11.4	253.7	553.0	553.0	1281.8	1834.8	0.0	0.0	4606.9
20.50	2772.1	68.4	68.4	0.0	11.3	11.3	253.8	553.1	553.1	1281.8	1834.8	0.0	0.0	4606.9

HTGR-6
MEU5(U,TH)-RUF,FS
INIT. C/TH: 275 EQUIL C/TH: 500
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.00	4964.2	59.1	59.1	0.0	103.6	103.6	39.4	924.2	924.2	328.6	1252.8	9.8	13.7	6230.6
1.50	4924.7	77.5	77.5	0.0	75.8	75.8	29.3	908.8	908.8	320.8	1229.6	11.3	16.8	6171.1
2.00	4884.4	90.4	90.4	0.0	58.1	58.1	18.5	937.8	937.8	270.9	1208.7	11.9	18.9	6112.0
2.50	4843.2	99.1	99.1	0.0	41.8	41.8	13.6	917.8	917.8	271.8	1189.6	11.9	20.3	6053.2
3.00	4801.3	104.6	104.6	0.0	30.2	30.2	9.8	899.0	899.0	273.2	1172.1	11.6	21.5	5994.9
3.50	4758.7	107.6	107.6	0.0	22.2	22.2	7.0	882.0	882.0	274.0	1156.0	11.3	22.5	5937.2
4.00	4715.8	109.5	109.5	0.0	16.9	16.9	4.8	867.8	867.8	273.3	1141.0	11.1	23.4	5880.3
4.50	4672.5	110.0	110.0	0.0	13.5	13.5	3.3	855.1	855.1	271.7	1126.9	10.8	24.3	5823.6
5.00	1667.1	44.1	44.1	0.0	6.0	6.0	12.0	346.0	346.0	821.2	1167.2	11.5	25.2	2859.5
5.50	1707.2	45.4	45.4	2.4	5.9	5.9	8.1	353.5	353.5	799.2	1152.8	11.8	25.8	2885.7
6.00	1800.7	48.2	48.2	3.1	6.1	6.1	7.8	374.7	374.7	833.6	1208.3	12.8	27.3	3036.3
6.50	1947.6	52.5	52.5	3.7	6.7	6.7	8.2	408.1	408.1	903.7	1311.8	14.2	29.7	3280.2
7.00	2179.6	58.9	58.9	4.2	7.8	7.8	8.7	466.7	466.7	928.7	1395.4	15.4	31.6	3606.7
7.50	2566.8	68.8	68.8	4.7	10.0	10.0	9.2	579.3	579.3	922.6	1501.9	16.6	33.6	4102.4
8.00	2569.2	69.3	69.3	5.2	10.1	10.1	10.4	552.2	552.2	953.4	1505.6	16.7	33.8	4108.7
8.50	2571.9	69.6	69.6	5.8	10.7	10.7	11.4	553.2	553.2	960.4	1513.6	16.9	34.0	4119.5
9.00	2575.1	69.7	69.7	6.4	11.4	11.4	17.6	556.2	556.2	1232.5	1788.7	19.1	38.4	4402.2
9.50	2577.2	69.4	69.4	2.7	12.0	12.0	21.3	556.4	556.4	1187.9	1744.3	18.6	36.9	4358.5
10.00	2578.2	69.1	69.1	2.9	12.2	12.2	21.0	556.1	556.1	1150.8	1706.9	17.9	36.0	4321.1
10.50	2578.2	68.7	68.7	3.1	12.2	12.2	19.5	555.3	555.3	1086.8	1642.2	17.2	34.7	4255.1
11.00	2577.6	68.4	68.4	3.3	12.0	12.0	17.5	554.3	554.3	1018.0	1572.3	16.4	33.5	4183.4
11.50	2576.7	68.2	68.2	3.6	11.8	11.8	14.8	553.1	553.1	929.0	1482.1	15.6	31.9	4090.8
12.00	2575.8	68.1	68.1	4.1	11.6	11.6	14.3	553.2	553.2	981.6	1534.8	16.0	32.9	4143.5
12.50	2574.9	68.0	68.0	4.0	11.3	11.3	13.9	552.6	552.6	955.6	1508.2	15.8	32.5	4115.6
13.00	2574.0	68.0	68.0	3.9	11.1	11.1	11.6	551.3	551.3	840.4	1391.7	14.8	30.5	3996.2
13.50	2573.5	68.0	68.0	3.8	11.0	11.0	12.1	551.6	551.6	880.6	1432.2	15.2	31.2	4037.0
14.00	2573.3	68.2	68.2	3.8	10.9	10.9	12.4	551.8	551.8	895.6	1447.4	15.4	31.6	4052.4
14.50	2573.4	68.3	68.3	3.8	10.9	10.9	12.8	552.1	552.1	918.6	1470.7	15.7	32.1	4076.2
15.00	2573.7	68.4	68.4	3.8	11.0	11.0	13.3	552.5	552.5	941.6	1494.1	16.0	32.6	4100.3
15.50	2574.0	68.5	68.5	3.8	11.1	11.1	14.0	552.9	552.9	974.1	1527.0	16.3	33.2	4134.2
16.00	2574.3	68.5	68.5	3.8	11.2	11.2	13.7	552.9	552.9	950.5	1503.4	16.1	32.8	4110.5
16.50	2574.7	68.6	68.6	3.9	11.3	11.3	13.9	553.1	553.1	957.8	1510.8	16.2	32.9	4118.4
17.00	2575.0	68.6	68.6	3.9	11.3	11.3	14.9	553.6	553.6	1006.1	1559.7	16.6	33.7	4168.5
17.50	2575.2	68.6	68.6	3.9	11.4	11.4	14.7	553.5	553.5	990.3	1543.8	16.4	33.4	4152.4
18.00	2575.3	68.5	68.5	3.9	11.4	11.4	14.7	553.4	553.4	986.0	1539.5	16.4	33.3	4148.1
18.50	2575.3	68.5	68.5	3.9	11.4	11.4	14.5	553.3	553.3	977.7	1531.0	16.3	33.1	4139.4
19.00	2575.2	68.4	68.4	3.9	11.4	11.4	14.3	553.2	553.2	969.0	1522.2	16.2	32.9	4130.3
19.50	2575.0	68.4	68.4	3.9	11.4	11.4	14.0	553.0	553.0	955.6	1508.6	16.0	32.7	4116.3
20.00	2574.9	68.4	68.4	3.9	11.3	11.3	14.2	553.1	553.1	966.7	1519.8	16.1	32.9	4127.6
20.50	2574.8	68.4	68.4	3.9	11.3	11.3	14.1	553.0	553.0	966.5	1519.5	16.1	32.9	4127.2
21.00	2574.7	68.4	68.4	3.9	11.3	11.3	13.6	552.8	552.8	942.6	1495.3	15.9	32.5	4102.5
21.00	2598.6	67.0	67.0	5.6	14.2	14.2	17.9	557.8	557.8	968.3	1526.1	16.0	31.0	4155.8
21.00	2622.8	64.9	64.9	8.0	18.4	18.4	23.5	563.0	563.0	987.7	1550.7	15.9	29.4	4202.8
21.00	2647.1	61.6	61.6	11.4	24.4	24.4	31.4	568.6	568.6	1015.8	1584.3	15.8	27.6	4259.0
21.00	2671.7	56.6	56.6	16.3	33.1	33.1	42.1	574.5	574.5	1041.9	1616.5	15.4	25.2	4313.4
21.00	2696.5	49.2	49.2	23.3	45.4	45.4	57.6	581.1	581.1	1083.9	1665.0	14.6	22.4	4384.0
21.00	2721.5	38.3	38.3	33.3	62.5	62.5	77.4	588.4	588.4	1115.2	1703.6	12.8	18.3	4443.3
21.00	2746.7	22.5	22.5	47.7	86.6	86.6	105.7	596.6	596.6	1164.6	1761.2	9.4	11.8	4519.7

HTGR-7
HEU5(TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	55.9	53.5
FINAL CORE	55.9	54.0
ANNUAL EQUILIBRIUM	12.8	12.4
30 YR CUMULATIVE	435.5	413.5
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	503.4	0.0
FINAL CORE	315.1	138.5
ANNUAL EQUILIBRIUM	71.2	19.3
30 YR CUMULATIVE	2815.6	559.8
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	502.8	0.0
FINAL CORE	311.0	136.6
ANNUAL EQUILIBRIUM	70.2	18.8
30 YR CUMULATIVE	2781.0	546.3
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	3.0
FINAL CORE	0.0	2.3
ANNUAL EQUILIBRIUM	0.0	0.7
30 YR CUMULATIVE	0.0	27.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	10.5
FINAL CORE	0.0	10.5
ANNUAL EQUILIBRIUM	0.0	4.2
30 YR CUMULATIVE	0.0	132.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	891.9
FINAL CORE	1151.7	1189.2
ANNUAL EQUILIBRIUM	268.9	278.0
30 YR CUMULATIVE	7111.9	8789.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	1985.0	513.5
FINAL CORE	1243.2	546.5
ANNUAL EQUILIBRIUM	288.6	76.0
30 YR CUMULATIVE	11107.9	2840.0

NUMBER OF BATCHES	4
REFUELING INTERVAL (YRS)	1.07
POWER (GWE)	1.332
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	130200.0
THERMAL EFFICIENCY	0.396

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 20.27

HTGR-7
HEU5(TH)-RUF
INIT. C/TH: 180 EQUIL C/TH: 180
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	15194.5	0.0	0.0	0.0	0.0	0.0	676.9	0.0	0.0	726.9	726.9	0.0	0.0	15921.4
0.0	14832.0	0.0	0.0	0.0	0.0	0.0	660.8	0.0	0.0	709.6	709.6	0.0	0.0	15541.6
0.0	14832.0	0.0	0.0	0.0	0.0	0.0	660.8	0.0	0.0	709.6	709.6	0.0	0.0	15541.6
0.0	14564.6	0.0	0.0	0.0	0.0	0.0	648.8	0.0	0.0	696.8	696.8	0.0	0.0	15261.4
1.60	15194.5	0.0	0.0	0.0	0.0	0.0	1000.7	0.0	0.0	1074.6	1074.6	0.0	0.0	16269.1
2.67	14832.0	221.6	221.6	0.0	1.4	299.3	335.0	239.2	646.7	359.7	1006.4	0.0	0.0	15838.4
3.73	14832.0	283.0	283.0	0.0	4.1	178.8	351.9	318.4	615.2	377.9	993.2	0.0	0.0	15825.2
4.80	14564.6	320.2	320.2	0.0	7.7	114.6	335.3	378.0	609.5	360.0	969.5	0.0	0.0	15534.1
5.87	15194.5	335.0	335.0	0.0	11.7	76.6	369.3	407.5	597.9	396.5	994.5	0.0	0.0	16189.0
6.93	14832.0	343.1	343.1	0.0	9.6	148.1	289.5	407.1	739.8	310.8	1050.6	0.0	0.0	15882.6
8.00	14832.0	358.6	358.6	0.0	16.2	63.8	345.5	450.5	562.9	371.0	934.0	0.0	0.0	15766.0
9.07	14564.6	365.3	365.3	0.0	20.3	70.9	329.7	473.9	592.5	354.0	946.5	0.0	0.0	15511.1
10.13	15194.5	363.1	363.1	0.0	24.2	72.2	353.6	486.2	599.1	379.7	978.9	0.0	0.0	16173.4
11.20	14832.0	379.0	379.0	0.0	27.8	80.3	296.7	517.2	641.2	318.6	959.8	0.0	0.0	15791.8
12.27	14832.0	372.1	372.1	0.0	26.3	67.5	334.9	504.1	601.3	359.7	961.0	0.0	0.0	15793.0
13.33	14564.6	373.9	373.9	0.0	31.2	80.4	317.9	524.7	640.7	341.4	982.1	0.0	0.0	15546.7
14.40	15194.5	369.0	369.0	0.0	33.8	80.9	344.1	529.6	640.5	369.5	1010.0	0.0	0.0	16204.5
15.47	14832.0	383.8	383.8	0.0	36.4	87.2	308.4	555.6	674.9	331.1	1006.0	0.0	0.0	15838.0
16.53	14832.0	378.2	378.2	0.0	38.8	81.7	331.4	559.1	659.4	355.8	1015.2	0.0	0.0	15847.2
17.60	14564.6	378.3	378.3	0.0	37.8	86.8	312.2	554.8	668.5	335.3	1003.7	0.0	0.0	15568.3
18.67	15194.5	373.6	373.6	0.0	40.5	87.5	341.9	560.6	669.1	367.1	1036.2	0.0	0.0	16230.7
19.73	14832.0	388.3	388.3	0.0	42.2	93.6	304.0	583.4	701.4	326.5	1027.8	0.0	0.0	15859.8
20.80	14832.0	382.5	382.5	0.0	43.9	90.5	320.0	584.5	690.6	343.6	1034.2	0.0	0.0	15866.2
21.87	14564.6	382.5	382.5	0.0	45.0	95.5	313.5	589.7	704.2	336.7	1040.8	0.0	0.0	15605.4
22.93	15194.5	376.9	376.9	0.0	44.3	92.2	340.3	580.1	658.3	365.4	1053.7	0.0	0.0	16248.2
24.00	14832.0	391.5	391.5	0.0	45.9	98.7	302.9	603.5	722.2	325.3	1047.5	0.0	0.0	15879.5
25.07	14832.0	385.5	385.5	0.0	47.0	94.3	319.7	602.5	708.4	343.3	1051.7	0.0	0.0	15883.7

HTGR-7
HEU5(TH)-RUF
INIT. C/TH: 180 EQUIL C/TH: 180
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.60	14863.6	227.3	227.3	0.0	1.4	306.9	0.0	245.3	663.2	0.0	663.2	1.2	2.1	15528.9
2.67	14300.0	290.2	290.2	0.0	4.2	183.4	0.0	326.5	631.0	0.0	631.0	1.4	3.5	14934.5
3.73	14096.5	328.4	328.4	0.0	7.9	117.5	0.0	384.6	625.1	0.0	625.1	1.6	5.4	14727.0
4.80	13646.4	343.5	343.5	0.0	12.0	78.5	0.0	417.9	613.3	0.0	613.3	1.8	7.6	14267.2
5.87	14352.0	351.9	351.9	0.0	9.9	151.9	0.0	417.5	758.7	0.0	758.7	2.6	9.5	15120.3
6.93	14014.1	367.8	367.8	0.0	16.6	65.5	44.8	462.0	577.4	177.5	754.9	2.6	10.2	14779.1
8.00	14015.4	374.6	374.6	0.0	20.9	72.7	26.7	486.0	607.7	155.6	763.3	2.5	9.3	14738.0
9.07	13761.7	372.4	372.4	0.0	24.8	74.0	16.4	498.7	614.5	143.0	757.5	2.3	8.3	14527.5
10.13	14355.1	388.7	388.7	0.0	28.5	82.3	10.0	530.4	657.6	130.8	788.4	2.2	7.9	15151.4
11.20	14012.5	381.7	381.7	0.0	27.0	69.2	21.2	517.1	616.7	211.6	828.3	2.8	10.0	14850.4
12.27	14012.2	383.5	383.5	0.0	32.0	82.4	7.3	538.2	657.2	70.9	728.1	1.6	6.1	14746.4
13.33	13760.0	378.5	378.5	0.0	34.7	83.0	7.8	543.2	656.9	74.7	731.6	1.6	6.3	14497.9
14.40	14356.0	393.7	393.7	0.0	37.4	89.5	7.4	569.9	692.2	71.2	763.4	1.7	6.6	15126.0
15.47	14014.6	387.8	387.8	0.0	39.8	83.8	8.2	573.5	676.3	78.4	754.7	1.6	6.4	14775.7
16.53	14016.4	388.0	388.0	0.0	38.9	89.0	6.5	569.0	685.6	61.5	747.1	1.6	6.1	14769.7
17.60	13765.8	383.2	383.2	0.0	41.6	89.8	7.8	575.0	686.2	73.5	759.8	1.7	6.7	14532.2
18.67	14363.0	398.2	398.2	0.0	43.3	96.0	7.6	598.4	719.4	70.3	789.6	1.7	7.0	15159.6
19.73	14022.2	392.3	392.3	0.0	45.0	92.8	8.2	599.5	708.3	75.5	783.9	1.7	7.0	14813.1
20.80	14023.7	392.3	392.3	0.0	46.2	98.0	7.0	604.8	722.2	63.5	785.7	1.7	7.0	14816.4
21.87	13772.0	386.6	386.6	0.0	45.4	94.5	8.1	595.0	705.9	71.8	777.7	1.7	7.0	14556.7
22.93	14368.9	401.5	401.5	0.0	47.1	101.2	7.8	619.0	740.8	68.3	809.1	1.8	7.5	15185.5
24.00	14027.2	395.4	395.4	0.0	48.2	96.7	8.6	618.0	726.6	74.2	800.7	1.8	7.5	14835.4
25.07	14028.3	395.2	395.2	0.0	49.0	100.3	7.8	621.7	736.3	68.6	802.9	1.7	7.6	14838.8
26.13	13776.5	389.4	389.4	0.0	49.4	100.0	8.5	618.2	730.8	71.7	802.6	1.8	7.9	14586.9
26.13	14574.8	403.6	403.6	0.0	48.1	135.0	12.6	626.1	778.1	73.3	851.3	1.6	5.4	15431.6
26.13	14426.8	399.4	399.4	0.0	48.3	170.6	21.6	623.3	798.1	88.9	887.1	1.3	3.4	15317.2
26.13	14628.4	393.8	393.8	0.0	48.1	251.6	30.2	616.0	863.5	90.1	953.6	0.9	1.6	15583.6

HTGR-8
HEU3(TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	95.8	93.4
FINAL CORE	95.8	93.6
ANNUAL EQUILIBRIUM	22.5	21.6
30 YR CUMULATIVE	745.8	720.4
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.8
FINAL CORE	0.0	5.3
ANNUAL EQUILIBRIUM	0.0	2.8
30 YR CUMULATIVE	0.0	52.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	1885.9	1883.6
FINAL CORE	2343.8	2154.7
ANNUAL EQUILIBRIUM	546.9	484.9
30 YR CUMULATIVE	17565.3	15835.4
URANIUM-235 (KG/GWE)		
INITIAL CORE	186.2	187.7
FINAL CORE	349.8	339.3
ANNUAL EQUILIBRIUM	78.1	76.0
30 YR CUMULATIVE	2226.9	2223.1

NUMBER OF BATCHES	4
REFUELING INTERVAL (YRS)	1.07
POWER (GWE)	1.332
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	36800.0
THERMAL EFFICIENCY	0.396

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 20.27

HTGR-8
HEU3(TH)-RUF
INIT. C/TH: 150 EQUIL C/TH: 150
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	25456.7	0.0	0.0	628.0	0.0	0.0	62.4	0.0	0.0	886.0	886.0	0.0	0.0	26342.7
0.0	25456.7	0.0	0.0	628.0	0.0	0.0	62.4	0.0	0.0	886.0	886.0	0.0	0.0	26342.7
0.0	25456.7	0.0	0.0	628.0	0.0	0.0	62.4	0.0	0.0	886.0	886.0	0.0	0.0	26342.7
0.0	25456.7	0.0	0.0	628.0	0.0	0.0	62.4	0.0	0.0	886.0	886.0	0.0	0.0	26342.7
1.07	25456.7	0.0	0.0	789.3	0.0	0.0	78.5	0.0	0.0	1113.6	1113.6	0.0	0.0	26570.3
2.13	25456.7	0.0	0.0	773.8	0.0	0.0	76.1	0.0	0.0	1104.4	1104.4	0.0	0.0	26561.1
3.20	25456.7	0.0	0.0	757.0	0.0	0.0	74.9	0.0	0.0	1091.6	1091.6	0.0	0.0	26548.3
4.27	25456.7	0.0	0.0	738.8	0.0	0.0	74.2	0.0	0.0	1075.7	1075.7	0.0	0.0	26532.4
5.33	25456.7	0.0	0.0	750.5	0.0	0.0	76.9	0.0	0.0	1101.7	1101.7	0.0	0.0	26558.4
6.40	25456.7	0.0	0.0	759.4	0.0	0.0	89.1	0.0	0.0	1159.4	1159.4	0.0	0.0	26616.1
7.47	25456.7	0.0	0.0	760.5	0.0	0.0	89.6	0.0	0.0	1165.4	1165.4	0.0	0.0	26622.1
8.53	25456.7	0.0	0.0	762.0	0.0	0.0	90.0	0.0	0.0	1170.5	1170.5	0.0	0.0	26627.2
9.60	25456.7	0.0	0.0	763.0	0.0	0.0	90.2	0.0	0.0	1173.2	1173.2	0.0	0.0	26629.9
10.67	25456.7	0.0	0.0	759.7	0.0	0.0	92.0	0.0	0.0	1178.3	1178.3	0.0	0.0	26635.0
11.73	25456.7	0.0	0.0	765.8	0.0	0.0	101.2	0.0	0.0	1221.4	1221.4	0.0	0.0	26678.1
12.80	25456.7	0.0	0.0	767.4	0.0	0.0	101.9	0.0	0.0	1226.9	1226.9	0.0	0.0	26683.6
13.87	25456.7	0.0	0.0	770.5	0.0	0.0	102.5	0.0	0.0	1233.4	1233.4	0.0	0.0	26690.1
14.93	25456.7	0.0	0.0	770.6	0.0	0.0	102.5	0.0	0.0	1234.4	1234.4	0.0	0.0	26691.1
16.00	25456.7	0.0	0.0	767.4	0.0	0.0	103.4	0.0	0.0	1235.5	1235.5	0.0	0.0	26692.2
17.07	25456.7	0.0	0.0	772.4	0.0	0.0	110.1	0.0	0.0	1268.8	1268.8	0.0	0.0	26725.5
18.13	25456.7	0.0	0.0	773.7	0.0	0.0	110.7	0.0	0.0	1273.2	1273.2	0.0	0.0	26729.9
19.20	25456.7	0.0	0.0	776.8	0.0	0.0	111.3	0.0	0.0	1279.7	1279.7	0.0	0.0	26736.4
20.27	25456.7	0.0	0.0	777.7	0.0	0.0	111.4	0.0	0.0	1281.4	1281.4	0.0	0.0	26738.1
21.33	25456.7	0.0	0.0	773.7	0.0	0.0	111.4	0.0	0.0	1278.5	1278.5	0.0	0.0	26735.2
22.40	25456.7	0.0	0.0	778.4	0.0	0.0	116.2	0.0	0.0	1305.3	1305.3	0.0	0.0	26762.0
23.47	25456.7	0.0	0.0	779.4	0.0	0.0	116.7	0.0	0.0	1308.8	1308.8	0.0	0.0	26765.5
24.53	25456.7	0.0	0.0	782.3	0.0	0.0	117.4	0.0	0.0	1315.3	1315.3	0.0	0.0	26772.0
25.60	25456.7	0.0	0.0	783.2	0.0	0.0	117.5	0.0	0.0	1316.9	1316.9	0.0	0.0	26773.6

HTGR -8
HEU3(TH)-RUF
INIT. C/TH: 150 EQUIL C/TH: 150
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.07	25193.5	0.0	625.3	0.0	0.0	61.3	0.0	0.0	895.1	0.0	895.1	0.0	0.1	26088.7
2.13	24939.7	0.0	626.5	0.0	0.0	61.9	0.0	0.0	907.9	0.0	907.9	0.0	0.4	25348.0
3.20	24692.8	0.0	628.6	0.0	0.0	63.3	0.0	0.0	921.0	0.0	921.0	0.1	0.8	25614.7
4.27	24451.1	0.0	630.2	0.0	0.0	65.0	0.0	0.0	932.8	0.0	932.8	0.1	1.4	25385.3
5.33	24472.7	0.0	666.0	0.0	0.0	80.1	0.0	0.0	1029.4	0.0	1029.4	0.2	1.7	25503.8
6.40	24480.4	0.0	667.1	0.0	0.0	80.6	0.0	0.0	1035.6	0.0	1035.6	0.2	1.8	25517.8
7.47	24484.5	0.0	666.3	0.0	0.0	80.8	0.0	0.0	1037.3	0.0	1037.3	0.2	2.0	25523.8
8.53	24486.8	0.0	664.5	0.0	0.0	80.7	0.0	0.0	1036.3	0.0	1036.3	0.2	2.1	25525.2
9.60	24489.9	0.0	668.7	0.0	0.0	83.2	0.0	0.0	1052.0	0.0	1052.0	0.2	2.3	25544.2
10.67	24494.4	0.0	672.0	0.0	0.0	92.4	0.0	0.0	1091.9	0.0	1091.9	0.2	2.6	25588.9
11.73	24497.0	0.0	673.7	0.0	0.0	93.1	0.0	0.0	1097.6	0.0	1097.6	0.2	2.7	25597.4
12.80	24499.3	0.0	675.4	0.0	0.0	93.6	0.0	0.0	1102.2	0.0	1102.2	0.3	2.8	25604.3
13.87	24501.2	0.0	676.9	0.0	0.0	93.8	0.0	0.0	1105.2	0.0	1105.2	0.3	2.9	25609.4
14.93	24503.1	0.0	677.5	0.0	0.0	95.0	0.0	0.0	1111.9	0.0	1111.9	0.3	3.1	25618.0
16.00	24506.4	0.0	680.0	0.0	0.0	101.6	0.0	0.0	1142.0	0.0	1142.0	0.3	3.5	25651.9
17.07	24508.2	0.0	681.3	0.0	0.0	102.2	0.0	0.0	1146.5	0.0	1146.5	0.3	3.6	25658.3
18.13	24509.9	0.0	682.9	0.0	0.0	102.7	0.0	0.0	1151.0	0.0	1151.0	0.3	3.7	25664.6
19.20	24511.2	0.0	683.9	0.0	0.0	102.7	0.0	0.0	1152.8	0.0	1152.8	0.3	3.7	25667.7
20.27	24512.5	0.0	684.2	0.0	0.0	103.2	0.0	0.0	1156.0	0.0	1156.0	0.3	3.9	25672.4
21.33	24514.9	0.0	686.1	0.0	0.0	107.9	0.0	0.0	1179.4	0.0	1179.4	0.4	4.3	25698.6
22.40	24516.2	0.0	687.1	0.0	0.0	108.3	0.0	0.0	1183.0	0.0	1183.0	0.4	4.4	25703.6
23.47	24517.5	0.0	688.5	0.0	0.0	108.9	0.0	0.0	1187.3	0.0	1187.3	0.4	4.4	25709.2
24.53	24518.5	0.0	689.4	0.0	0.0	108.9	0.0	0.0	1188.9	0.0	1188.9	0.4	4.5	25711.9
25.60	24519.3	0.0	689.2	0.0	0.0	108.8	0.0	0.0	1189.3	0.0	1189.3	0.4	4.6	25713.2
26.67	24521.1	0.0	690.9	0.0	0.0	112.2	0.0	0.0	1208.1	0.0	1208.1	0.4	5.0	25734.1
26.67	24752.2	0.0	706.0	0.0	0.0	113.8	0.0	0.0	1228.6	0.0	1228.6	0.2	3.1	25983.9
26.67	24985.3	0.0	725.9	0.0	0.0	115.6	0.0	0.0	1254.8	0.0	1254.8	0.1	1.5	26241.6
26.67	25220.1	0.0	750.7	0.0	0.0	116.7	0.0	0.0	1282.7	0.0	1282.7	0.0	0.4	26503.2

HTGR-9
PLUTONIUM/THORIUM

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	28.2	27.3
FINAL CORE	23.2	22.4
ANNUAL EQUILIBRIUM	7.3	7.0
30 YR CUMULATIVE	235.4	224.2
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	1448.2	461.0
FINAL CORE	2319.8	1012.8
ANNUAL EQUILIBRIUM	724.9	199.2
30 YR CUMULATIVE	22426.3	6216.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	2069.8	884.4
FINAL CORE	3317.6	1705.0
ANNUAL EQUILIBRIUM	1036.7	346.3
30 YR CUMULATIVE	32070.5	11380.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	496.2
FINAL CORE	0.0	425.7
ANNUAL EQUILIBRIUM	0.0	178.8
30 YR CUMULATIVE	0.0	5404.6
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	6.0
FINAL CORE	0.0	3.8
ANNUAL EQUILIBRIUM	0.0	2.8
30 YR CUMULATIVE	0.0	82.2

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.07
POWER (GWE)	1.332
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	100000.0
THERMAL EFFICIENCY	0.396

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 20.27

HTGR-9
PU(TH)
INIT. C/TH: 350 EQUIL C/TH: 500
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	9998.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	643.8	920.7	10919.1
0.0	9998.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	643.8	920.7	10919.1
0.0	9998.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	643.8	920.7	10919.1
1.07	6990.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	8463.5
2.13	7852.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9325.3
3.20	7332.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	8806.9
4.27	8251.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9724.3
5.33	8321.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9794.8
6.40	7826.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9299.5
7.47	8343.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9816.3
8.53	8302.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9775.2
9.60	7997.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9471.5
10.67	8316.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9789.4
11.73	8254.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9727.3
12.80	8083.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1030.0	1473.1	9556.5

HTGR-9
PU(TH)
INIT. C/TH: 350 EQUIL C/TH: 500
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.07	9828.7	139.9	139.9	0.0	0.5	0.5	0.0	147.7	147.7	0.0	147.7	331.3	584.8	10561.2
2.13	9656.3	231.3	231.3	0.0	2.5	2.5	0.0	253.3	253.3	0.0	253.3	180.8	362.3	10277.8
3.20	9485.0	291.9	291.9	0.0	6.0	6.0	0.0	330.9	330.9	0.0	330.9	103.6	234.0	10049.9
4.27	6624.6	212.7	212.7	0.0	4.2	4.2	0.0	240.2	240.2	0.0	240.2	203.7	417.7	7282.5
5.33	7444.0	241.5	241.5	0.0	4.6	4.6	0.0	271.8	271.8	0.0	271.8	227.3	447.4	8163.3
6.40	6950.9	227.6	227.6	0.0	4.5	4.5	0.0	255.6	255.6	0.0	255.6	244.5	469.5	7675.5
7.47	7830.6	252.9	252.9	0.0	4.7	4.7	0.0	283.7	283.7	0.0	283.7	254.6	481.3	8595.5
8.53	7899.8	254.5	254.5	0.0	4.6	4.6	0.0	285.3	285.3	0.0	285.3	259.2	487.2	8672.3
9.60	7427.0	241.0	241.0	0.0	4.4	4.4	0.0	270.1	270.1	0.0	270.1	261.2	489.9	8187.0
10.67	7921.8	254.8	254.8	0.0	4.6	4.6	0.0	285.5	285.5	0.0	285.5	262.8	491.7	8699.0
11.73	7882.6	253.7	253.7	0.0	4.6	4.6	0.0	284.3	284.3	0.0	284.3	263.3	492.3	8659.2
12.80	7591.6	245.6	245.6	0.0	4.6	4.6	0.0	275.0	275.0	0.0	275.0	263.3	492.5	8359.5
13.87	7896.4	254.1	254.1	0.0	4.6	4.6	0.0	284.6	284.6	0.0	284.6	283.8	493.0	8674.0
13.87	7975.8	198.4	198.4	0.0	1.8	1.8	0.0	215.1	215.1	0.0	215.1	416.1	730.3	8921.2
13.87	7946.7	115.6	115.6	0.0	0.4	0.4	0.0	121.5	121.5	0.0	121.5	650.5	1050.1	9118.3

HTGR-10
MEU3(U,TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	38.9	37.7
FINAL CORE	35.5	34.5
ANNUAL EQUILIBRIUM	11.1	10.6
30 YR CUMULATIVE	360.1	345.7
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	109.6
FINAL CORE	0.0	141.1
ANNUAL EQUILIBRIUM	0.0	50.0
30 YR CUMULATIVE	0.0	1546.7
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	157.7
FINAL CORE	0.0	198.2
ANNUAL EQUILIBRIUM	0.0	74.6
30 YR CUMULATIVE	0.0	2289.5
URANIUM-233 (KG/GWE)		
INITIAL CORE	1349.1	1009.0
FINAL CORE	1867.1	1235.0
ANNUAL EQUILIBRIUM	583.5	327.3
30 YR CUMULATIVE	18371.4	10706.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	18.8
FINAL CORE	9.0	38.3
ANNUAL EQUILIBRIUM	2.8	16.9
30 YR CUMULATIVE	74.7	482.6

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.07
POWER (GWE)	1.332
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50000.0
THERMAL EFFICIENCY	0.396

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 20.27

HTGR -10
MEU3(U,TH)-RUF
INIT. C/TH: 2/5 EQUIL C/TH: 300
CHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	MAKEUP U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	MAKEUP U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	MAKEUP URANIUM	TOTAL URANIUM LOADED	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
0.0	13771.9	0.0	0.0	599.1	0.0	0.0	0.0	0.0	0.0	5086.7	5086.7	0.0	0.0	18858.6
0.0	13771.9	0.0	0.0	599.1	0.0	0.0	0.0	0.0	0.0	5086.7	5086.7	0.0	0.0	18858.6
0.0	13771.9	0.0	0.0	599.1	0.0	0.0	0.0	0.0	0.0	5086.7	5086.7	0.0	0.0	18858.6
1.07	12581.4	0.0	0.0	979.6	0.0	0.0	0.0	0.0	0.0	8317.5	8317.5	0.0	0.0	20898.9
2.13	12593.5	0.0	0.0	887.7	0.0	0.0	0.5	0.0	0.0	7519.6	7519.6	0.0	0.0	20113.1
3.20	12593.5	0.0	0.0	831.8	0.0	0.0	2.5	0.0	0.0	7046.8	7046.8	0.0	0.0	19640.3
4.27	12593.5	0.0	0.0	799.7	0.0	0.0	5.7	0.0	0.0	6783.9	6783.9	0.0	0.0	19377.4
5.33	12593.5	0.0	0.0	826.3	0.0	0.0	4.7	0.0	0.0	7007.5	7007.5	0.0	0.0	19601.0
6.40	12581.4	0.0	0.0	833.3	0.0	0.0	4.5	0.0	0.0	7066.2	7066.2	0.0	0.0	19647.6
7.47	12581.4	0.0	0.0	833.7	0.0	0.0	4.6	0.0	0.0	7070.4	7070.4	0.0	0.0	19651.8
8.53	12581.4	0.0	0.0	828.4	0.0	0.0	4.6	0.0	0.0	7025.7	7025.7	0.0	0.0	19607.1
9.60	12581.4	0.0	0.0	828.4	0.0	0.0	4.6	0.0	0.0	7022.6	7022.6	0.0	0.0	19604.0
10.67	12581.4	0.0	0.0	828.4	0.0	0.0	4.6	0.0	0.0	7025.8	7025.8	0.0	0.0	19607.2
11.73	12581.4	0.0	0.0	829.4	0.0	0.0	4.6	0.0	0.0	7033.9	7033.9	0.0	0.0	19615.3
12.80	12581.4	0.0	0.0	829.3	0.0	0.0	4.6	0.0	0.0	7033.1	7033.1	0.0	0.0	19614.5
13.87	12581.4	0.0	0.0	829.2	0.0	0.0	4.6	0.0	0.0	7032.1	7032.1	0.0	0.0	19613.5
14.93	12581.4	0.0	0.0	829.0	0.0	0.0	4.6	0.0	0.0	7030.8	7030.8	0.0	0.0	19612.2
16.00	12581.4	0.0	0.0	829.0	0.0	0.0	4.6	0.0	0.0	7031.0	7031.0	0.0	0.0	19612.0
17.07	12581.4	0.0	0.0	829.1	0.0	0.0	4.6	0.0	0.0	7031.4	7031.4	0.0	0.0	19612.8
18.13	12581.4	0.0	0.0	829.1	0.0	0.0	4.6	0.0	0.0	7031.6	7031.6	0.0	0.0	19613.0
19.20	12581.4	0.0	0.0	829.1	0.0	0.0	4.6	0.0	0.0	7031.5	7031.5	0.0	0.0	19612.9

HTGR -10
MEU3(U,TH)-RUF
INIT. C/TH: 275 EQUIL C/TH: 300
DISCHARGE DATA (KG)

YEAR	THORIUM	BRED RECYCLE U-233	TOTAL RECYCLE U-233	CREDIT U-233	BRED RECYCLE U-235	TOTAL RECYCLE U-235	CREDIT U-235	BRED RECYCLE URANIUM	TOTAL RECYCLE URANIUM	CREDIT URANIUM	TOTAL URANIUM DISCHG	FISSILE PU	TOTAL PU	TOTAL HEAVY METAL
1.07	13551.3	171.6	171.6	311.6	0.5	0.5	2.5	181.0	181.0	4735.8	4916.8	37.2	50.7	18518.8
2.13	13348.7	261.8	261.8	178.8	2.5	2.5	6.1	287.2	287.2	4524.4	4811.6	51.3	73.9	18234.2
3.20	13155.9	314.7	314.7	107.2	5.7	5.7	9.0	358.2	358.2	4368.2	4726.4	58.3	87.8	17970.0
4.27	12040.9	288.2	288.2	206.4	4.7	4.7	14.3	325.3	325.3	7259.3	7584.6	82.0	121.3	19746.7
5.33	12058.9	286.9	286.9	196.4	4.5	4.5	14.7	323.4	323.4	6558.7	6882.1	75.6	112.7	19053.7
6.40	12058.0	286.0	286.0	183.7	4.6	4.6	17.2	322.6	322.6	6135.2	6457.8	71.5	107.0	18622.9
7.47	12054.2	286.4	286.4	172.6	4.6	4.6	20.6	323.5	323.5	5893.6	6217.1	69.5	104.2	18375.5
8.53	12053.8	286.8	286.8	177.8	4.7	4.7	19.7	323.9	323.9	6092.6	6416.5	71.3	106.7	18576.4
9.60	12042.9	286.6	286.6	180.1	4.6	4.6	19.6	323.5	323.5	6145.9	6469.4	71.8	107.4	18619.7
10.67	12043.5	286.5	286.5	180.8	4.6	4.6	19.7	323.4	323.4	6150.3	6473.7	71.8	107.4	18624.6
11.73	12043.3	286.4	286.4	179.6	4.6	4.6	19.7	323.3	323.3	6110.4	6433.7	71.5	106.9	18583.9
12.80	12043.3	286.4	286.4	179.3	4.6	4.6	19.7	323.3	323.3	6107.7	6431.6	71.4	106.9	18581.1
13.87	12043.1	286.4	286.4	179.3	4.6	4.6	19.7	323.4	323.4	6110.1	6433.5	71.5	106.9	18583.5
14.93	12043.1	286.4	286.4	179.5	4.6	4.6	19.7	323.4	323.4	6117.4	6440.8	71.5	107.0	18590.9
16.00	12043.2	286.4	286.4	179.5	4.6	4.6	19.7	323.4	323.4	6116.7	6440.1	71.5	107.0	18590.3
17.07	12043.2	286.4	286.4	179.5	4.6	4.6	19.7	323.4	323.4	6115.9	6439.3	71.5	107.0	18589.4
18.13	12043.2	286.4	286.4	179.5	4.6	4.6	19.7	323.4	323.4	6114.7	6438.1	71.5	106.9	18585.2
19.20	12043.2	286.4	286.4	179.5	4.6	4.6	19.7	323.4	323.4	6115.0	6438.4	71.5	107.0	18585.6
20.27	12043.2	286.4	286.4	179.5	4.6	4.6	19.7	323.4	323.4	6115.2	6438.6	71.5	107.0	18585.2
20.27	12220.0	236.0	236.0	298.9	1.9	1.9	15.3	256.4	256.4	6335.4	6591.8	66.8	93.9	18905.7
20.27	12399.4	148.5	148.5	497.8	0.4	0.4	9.6	155.4	155.4	6625.2	6780.6	51.8	66.6	19246.6

HWBR-1
HEU3(TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	263.8	260.9
FINAL CORE	263.3	260.5
ANNUAL EQUILIBRIUM	105.4	104.2
30 YR CUMULATIVE	3162.5	3127.8
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	2948.0	3181.0
FINAL CORE	3422.0	3457.0
ANNUAL EQUILIBRIUM	1354.0	1365.2
30 YR CUMULATIVE	40051.0	40761.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	717.0	494.0
FINAL CORE	377.0	387.0
ANNUAL EQUILIBRIUM	135.2	140.4
30 YR CUMULATIVE	4710.0	4399.0

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	2.50
POWER (GWE)	1.000
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	11300.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 17.50

HWR-1
LEU5(U)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	77.1	20.5	28970.0	0.1	70.5	25.2	4.7	1.1	0.3	29169.5	241.0
2.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
3.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
4.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
5.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
6.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
7.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
8.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
9.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
10.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
11.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
12.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
13.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
14.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
15.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
16.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
17.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
18.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
19.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
20.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
21.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
22.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
23.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
24.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
25.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
26.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
27.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
28.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
29.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
30.00	0.0	0.0	0.0	0.0	0.0	70.4	89.4	54254.0	0.7	160.6	119.1	27.6	16.8	3.7	54742.3	1103.0
30.00	0.0	0.0	0.0	0.0	0.0	721.6	197.2	162837.0	0.4	432.7	164.5	35.0	8.3	3.9	164400.3	1655.2

HWR-2
PU (TH) RECYCLE PLUTONIUM

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	144.0	0.0
FINAL CORE	42.9	136.8
ANNUAL EQUILIBRIUM	43.2	42.9
30 YR CUMULATIVE	1382.5	1364.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	2799.2	0.0
FINAL CORE	1030.2	2269.9
ANNUAL EQUILIBRIUM	1013.5	441.3
30 YR CUMULATIVE	30628.0	13453.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	5027.1	0.0
FINAL CORE	3137.1	8647.9
ANNUAL EQUILIBRIUM	2949.6	1934.2
30 YR CUMULATIVE	78747.5	55499.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	558.3
ANNUAL EQUILIBRIUM	0.0	319.0
30 YR CUMULATIVE	0.0	10075.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.8
ANNUAL EQUILIBRIUM	0.0	1.4
30 YR CUMULATIVE	0.0	47.3
NUMBER OF BATCHES		1
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.260
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		23400.0
THERMAL EFFICIENCY		0.313

HWR-2
PU (TH) RECYCLE PLUTONIUM
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	144798.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	3023.0	2398.0	504.0	393.0	0.0	151132.2	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	17900.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	373.0	297.0	62.2	48.4	0.0	18682.6	0.0
3.00	45149.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	942.0	748.0	157.0	122.0	0.0	47123.1	0.0
4.00	44892.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	931.0	918.0	198.0	179.0	0.0	47123.7	0.0
5.00	44501.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	914.0	1178.0	260.0	265.0	0.0	47124.6	0.0
6.00	44501.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	914.0	1178.0	260.0	265.0	0.0	47124.6	0.0
7.00	44501.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	914.0	1178.0	260.0	265.0	0.0	47124.6	0.0
8.00	44501.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	914.0	1178.0	260.0	265.0	0.0	47124.6	0.0
9.00	44414.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	912.0	1228.0	271.0	293.0	0.0	47124.8	0.0
10.00	44041.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	906.0	1441.0	316.0	411.0	0.0	47122.5	0.0
11.00	44041.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	906.0	1441.0	316.0	411.0	0.0	47122.5	0.0
12.00	44041.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	906.0	1441.0	316.0	411.0	0.0	47122.5	0.0
13.00	44041.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	906.0	1441.0	316.0	411.0	0.0	47122.5	0.0
14.00	44041.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	906.0	1441.0	316.0	411.0	0.0	47122.5	0.0
15.00	43695.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	897.0	1614.0	355.0	553.0	0.0	47122.1	0.0
16.00	43689.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	897.0	1617.0	356.0	556.0	0.0	47123.1	0.0
17.00	43689.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	897.0	1617.0	356.0	556.0	0.0	47123.1	0.0
18.00	43689.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	897.0	1617.0	356.0	556.0	0.0	47123.1	0.0
19.00	43689.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	897.0	1617.0	356.0	556.0	0.0	47123.1	0.0
20.00	43471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	886.0	1708.0	375.0	665.0	0.0	47113.4	0.0
21.00	43408.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	896.0	1734.0	381.0	697.0	0.0	47124.5	0.0
22.00	43408.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	896.0	1734.0	381.0	697.0	0.0	47124.5	0.0
23.00	43408.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	896.0	1734.0	381.0	697.0	0.0	47124.5	0.0
24.00	43408.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	896.0	1734.0	381.0	697.0	0.0	47124.5	0.0
25.00	43273.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	898.0	1794.0	391.0	759.0	0.0	47123.7	0.0
26.00	43171.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	900.0	1839.0	398.0	807.0	0.0	47123.8	0.0
27.00	43171.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	900.0	1839.0	398.0	807.0	0.0	47123.8	0.0
28.00	43171.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	900.0	1839.0	398.0	807.0	0.0	47123.8	0.0
29.00	43171.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	900.0	1839.0	398.0	807.0	0.0	47123.8	0.0
30.00	43171.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	900.0	1839.0	398.0	807.0	0.0	47123.8	0.0

HWR -2
PU (TH) RECYCLE PLUTONIUM
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	17611.0	0.0	0.4	180.0	12.4	1.1	0.1	0.0	1.1	69.4	239.0	60.7	68.6	0.0	18243.8	438.0
3.00	44420.0	0.0	1.1	455.0	31.3	2.8	0.2	0.0	2.7	175.0	604.0	153.0	173.0	0.0	46018.1	1106.0
4.00	44420.0	0.0	1.1	455.0	31.3	2.8	0.2	0.0	2.7	175.0	604.0	153.0	173.0	0.0	46018.1	1106.0
5.00	44420.0	0.0	1.1	455.0	31.3	2.8	0.2	0.0	2.7	175.0	604.0	153.0	173.0	0.0	46018.1	1106.0
6.00	44420.0	0.0	1.1	455.0	31.3	2.8	0.2	0.0	2.7	175.0	604.0	153.0	173.0	0.0	46018.1	1106.0
7.00	44311.0	0.0	1.1	456.0	30.4	2.7	0.2	0.0	3.0	180.0	662.0	167.0	203.0	0.0	46016.4	1108.0
8.00	43846.0	0.0	0.9	462.0	26.4	2.3	0.1	0.0	4.4	200.0	911.0	227.0	329.0	0.0	46009.1	1115.0
9.00	43846.0	0.0	0.9	462.0	26.4	2.3	0.1	0.0	4.4	200.0	911.0	227.0	329.0	0.0	46009.1	1115.0
10.00	43846.0	0.0	0.9	462.0	26.4	2.3	0.1	0.0	4.4	200.0	911.0	227.0	329.0	0.0	46009.1	1115.0
11.00	43846.0	0.0	0.9	462.0	26.4	2.3	0.1	0.0	4.4	200.0	911.0	227.0	329.0	0.0	46009.1	1115.0
12.00	43846.0	0.0	0.9	462.0	26.4	2.3	0.1	0.0	4.4	200.0	911.0	227.0	329.0	0.0	46009.1	1115.0
13.00	43437.0	0.0	0.8	417.0	23.5	1.9	0.1	0.0	4.6	230.0	1108.0	274.0	478.0	0.0	45974.9	1148.0
14.00	43430.0	0.0	0.8	416.0	23.4	1.9	0.1	0.0	4.6	231.0	1112.0	275.0	481.0	0.0	45975.8	1149.0
15.00	43430.0	0.0	0.8	416.0	23.4	1.9	0.1	0.0	4.6	231.0	1112.0	275.0	481.0	0.0	45975.8	1149.0
16.00	43430.0	0.0	0.8	416.0	23.4	1.9	0.1	0.0	4.6	231.0	1112.0	275.0	481.0	0.0	45975.8	1149.0
17.00	43430.0	0.0	0.8	416.0	23.4	1.9	0.1	0.0	4.6	231.0	1112.0	275.0	481.0	0.0	45975.8	1149.0
18.00	43174.0	0.0	0.8	405.0	22.5	1.8	0.1	0.0	5.0	246.0	1217.0	299.0	595.0	0.0	45966.2	1157.0
19.00	43100.0	0.0	0.8	402.0	22.3	1.8	0.1	0.0	5.1	250.0	1248.0	306.0	628.0	0.0	45964.1	1160.0
20.00	43100.0	0.0	0.8	402.0	22.3	1.8	0.1	0.0	5.1	250.0	1248.0	306.0	628.0	0.0	45964.1	1160.0
21.00	43100.0	0.0	0.8	402.0	22.3	1.8	0.1	0.0	5.1	250.0	1248.0	306.0	628.0	0.0	45964.1	1160.0
22.00	43100.0	0.0	0.8	402.0	22.3	1.8	0.1	0.0	5.1	250.0	1248.0	306.0	628.0	0.0	45964.1	1160.0
23.00	42958.0	0.0	0.8	396.0	21.8	1.7	0.1	0.0	5.6	260.0	1292.0	326.0	697.0	0.0	45959.0	1165.0
24.00	42850.0	0.0	0.8	392.0	21.2	1.7	0.1	0.0	5.9	267.0	1326.0	342.0	749.0	0.0	45955.7	1168.0
25.00	42850.0	0.0	0.8	392.0	21.2	1.7	0.1	0.0	5.9	267.0	1326.0	342.0	749.0	0.0	45955.7	1168.0
26.00	42850.0	0.0	0.8	392.0	21.2	1.7	0.1	0.0	5.9	267.0	1326.0	342.0	749.0	0.0	45955.7	1168.0
27.00	42850.0	0.0	0.8	392.0	21.2	1.7	0.1	0.0	5.9	267.0	1326.0	342.0	749.0	0.0	45955.7	1168.0
28.00	42763.0	0.0	0.8	391.0	20.9	1.7	0.1	0.0	5.8	269.0	1363.0	343.0	795.0	0.0	45953.3	1171.0
29.00	42610.0	0.0	0.7	388.0	20.5	1.7	0.1	0.0	5.7	272.0	1428.0	346.0	876.0	0.0	45948.7	1174.0
30.00	42610.0	0.0	0.7	388.0	20.5	1.7	0.1	0.0	5.7	272.0	1428.0	346.0	876.0	0.0	45948.7	1174.0
30.00	137582.3	77.0	0.7	626.5	20.7	1.0	0.0	0.0	23.1	1627.8	5321.5	1232.2	2691.7	1694.8	150898.9	0.0

HWBR-1
HEU3(TH)-ROF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	210500.0	0.0	0.0	2948.0	546.0	717.0	789.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215500.0	0.0
2.50	210540.0	0.0	0.0	3181.0	633.0	494.0	785.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215633.0	0.0
5.00	210450.0	0.0	0.0	3297.0	735.0	386.0	764.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215632.0	0.0
7.50	210410.0	0.0	0.0	3336.0	818.0	337.0	729.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215630.0	0.0
10.00	210330.0	0.0	0.0	3381.0	896.0	322.0	700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215629.0	0.0
12.50	210250.0	0.0	0.0	3414.0	964.0	325.0	673.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215626.0	0.0
15.00	210190.0	0.0	0.0	3443.0	1023.0	334.0	649.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215639.0	0.0
17.50	210240.0	0.0	0.0	3385.0	1046.0	338.0	611.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215620.0	0.0
20.00	210180.0	0.0	0.0	3413.0	1091.0	351.0	593.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215628.0	0.0
22.50	210120.0	0.0	0.0	3443.0	1130.0	363.0	577.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215633.0	0.0
25.00	210190.0	0.0	0.0	3388.0	1135.0	366.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215629.0	0.0
27.50	210120.0	0.0	0.0	3422.0	1167.0	377.0	539.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215625.0	0.0

HWBR-1
HEU3(TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
2.50	208200.0	133.0	0.0	3048.0	633.0	494.0	785.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213293.0	2100.0
5.00	208190.0	136.0	0.0	3161.0	735.0	386.0	764.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213372.0	2100.0
7.50	208110.0	135.0	0.0	3231.0	824.0	339.0	736.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213375.0	2100.0
10.00	208070.0	135.0	0.0	3246.0	896.0	322.0	700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213369.0	2100.0
12.50	208010.0	134.0	0.0	3280.0	964.0	324.0	673.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213385.0	2100.0
15.00	207950.0	133.0	0.0	3309.0	1023.0	334.0	649.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213398.0	2100.0
17.50	207900.0	132.0	0.0	3338.0	1073.0	346.0	627.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213416.0	2100.0
20.00	207940.0	133.0	0.0	3280.0	1091.0	351.0	593.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213388.0	2100.0
22.50	207890.0	133.0	0.0	3310.0	1130.0	363.0	577.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213403.0	2100.0
25.00	207840.0	132.0	0.0	3343.0	1164.0	376.0	564.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213419.0	2100.0
27.50	207890.0	133.0	0.0	3289.0	1167.0	377.0	539.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213395.0	2100.0
30.00	207840.0	132.0	0.0	3325.0	1195.0	387.0	530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213409.0	2100.0

HWR-1
LEU5(U)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	171.2	3.8
FINAL CORE	112.6	79.5
ANNUAL EQUILIBRIUM	112.6	0.0
30 YR CUMULATIVE	3496.4	83.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	30.9	0.0
ANNUAL EQUILIBRIUM	30.9	0.0
30 YR CUMULATIVE	913.1	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	59.7
FINAL CORE	0.0	371.1
ANNUAL EQUILIBRIUM	0.0	149.4
30 YR CUMULATIVE	0.0	4762.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	80.6
FINAL CORE	0.0	508.6
ANNUAL EQUILIBRIUM	0.0	257.8
30 YR CUMULATIVE	0.0	8064.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	937.3	61.2
FINAL CORE	531.7	572.7
ANNUAL EQUILIBRIUM	531.7	55.9
30 YR CUMULATIVE	16638.1	2254.2

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	19750.0
THERMAL EFFICIENCY	0.313

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

HWR-1
LEU5(U)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	1181.0	0.0	164875.0	0.0	0.0	0.0	0.0	0.0	0.0	166056.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	353.0	0.0	29058.0	0.0	0.0	0.0	0.0	0.0	0.0	29411.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	670.0	0.0	55175.0	0.0	0.0	0.0	0.0	0.0	0.0	55845.0	0.0

HWR -3
MEU3 (U,TH) RECYCLE URANIUM

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	130.9	2.7
FINAL CORE	67.7	129.0
ANNUAL EQUILIBRIUM	67.7	66.7
30 YR CUMULATIVE	2101.4	2070.9
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	8.4	18.0
ANNUAL EQUILIBRIUM	8.4	10.2
30 YR CUMULATIVE	144.6	201.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.1
ANNUAL EQUILIBRIUM	0.0	0.5
30 YR CUMULATIVE	0.0	4.2
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1.0
FINAL CORE	0.0	33.4
ANNUAL EQUILIBRIUM	0.0	24.4
30 YR CUMULATIVE	0.0	742.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1.3
FINAL CORE	0.0	41.0
ANNUAL EQUILIBRIUM	0.0	33.8
30 YR CUMULATIVE	0.0	1023.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	1859.5	35.1
FINAL CORE	986.5	1774.3
ANNUAL EQUILIBRIUM	986.5	886.5
30 YR CUMULATIVE	30490.3	27480.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	27.3	0.5
FINAL CORE	47.4	98.2
ANNUAL EQUILIBRIUM	47.4	54.4
30 YR CUMULATIVE	1005.8	1224.4
NUMBER OF BATCHES		1
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.260
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		14000.0
THERMAL EFFICIENCY		0.313

HWR-3
MEU3 (U,TH) RECYCLE URANIUM
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	13160.0	0.0	0.0	2343.0	0.0	34.4	0.0	17144.0	0.0	0.0	0.0	0.0	0.0	0.0	32681.4	0.0
1.00	2742.0	0.0	0.0	48.8	0.0	0.7	0.0	357.0	0.0	0.0	0.0	0.0	0.0	0.0	3148.5	0.0
2.00	68547.0	0.0	0.0	1220.0	0.0	17.9	0.0	8929.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.9	0.0
3.00	68554.0	0.0	0.1	1221.0	4.2	17.8	0.1	8916.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.1	0.0
4.00	68729.0	0.0	1.7	1244.0	105.0	15.6	2.5	8616.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.8	0.0
5.00	68729.0	0.0	1.7	1244.0	105.0	15.6	2.5	8616.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.8	0.0
6.00	68729.0	0.0	1.7	1244.0	105.0	15.6	2.5	8616.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.8	0.0
7.00	68666.0	0.0	1.8	1244.0	115.0	16.9	2.9	8667.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.5	0.0
8.00	68203.0	0.0	2.8	1245.0	188.0	26.8	5.9	9042.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.4	0.0
9.00	68203.0	0.0	2.8	1245.0	188.0	26.8	5.9	9042.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.4	0.0
10.00	68203.0	0.0	2.8	1245.0	188.0	26.8	5.9	9042.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.4	0.0
11.00	68191.0	0.0	2.9	1245.0	201.0	29.3	7.0	9037.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.1	0.0
12.00	68145.0	0.0	3.4	1245.0	254.0	39.4	11.2	9016.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.9	0.0
13.00	68145.0	0.0	3.4	1245.0	254.0	39.4	11.2	9016.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.9	0.0
14.00	68145.0	0.0	3.4	1245.0	254.0	39.4	11.2	9016.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.9	0.0
15.00	68130.0	0.0	3.5	1245.0	268.0	42.5	13.1	9011.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.1	0.0
16.00	68093.0	0.0	3.7	1244.0	305.0	50.6	18.0	9000.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
17.00	68093.0	0.0	3.7	1244.0	305.0	50.6	18.0	9000.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
18.00	68093.0	0.0	3.7	1244.0	305.0	50.6	18.0	9000.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
19.00	68085.0	0.0	3.7	1244.0	319.0	53.9	20.8	8987.0	0.0	0.0	0.0	0.0	0.0	0.0	78713.3	0.0
20.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
21.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
22.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
23.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
24.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
25.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
26.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
27.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
28.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
29.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0
30.00	68072.0	0.0	3.8	1243.0	345.0	59.7	25.9	8965.0	0.0	0.0	0.0	0.0	0.0	0.0	78714.3	0.0

HWR-3
MEU3 (U,TH) RECYCLE URANIUM
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	2700.0	0.0	0.1	44.2	4.3	0.6	0.1	354.0	0.0	1.1	0.4	0.1	0.0	0.0	3104.9	43.7
2.00	67507.0	0.0	1.8	1106.0	107.0	16.0	2.5	8839.0	0.0	27.0	10.8	3.6	1.1	0.0	77621.6	1092.0
3.00	67507.0	0.0	1.8	1106.0	107.0	16.0	2.5	8839.0	0.0	27.0	10.8	3.6	1.1	0.0	77621.6	1092.0
4.00	67507.0	0.0	1.8	1106.0	107.0	16.0	2.5	8839.0	0.0	27.0	10.8	3.6	1.1	0.0	77621.6	1092.0
5.00	67528.0	0.0	1.9	1108.0	117.0	17.4	2.9	8802.0	0.0	26.9	10.8	3.6	1.1	0.0	77619.4	1094.0
6.00	67683.0	0.0	2.9	1119.0	193.0	27.3	6.1	8530.0	0.0	26.3	10.5	3.6	1.1	0.0	77602.6	1112.0
7.00	67683.0	0.0	2.9	1119.0	193.0	27.3	6.1	8530.0	0.0	26.3	10.5	3.6	1.1	0.0	77602.6	1112.0
8.00	67683.0	0.0	2.9	1119.0	193.0	27.3	6.1	8530.0	0.0	26.3	10.5	3.6	1.1	0.0	77602.6	1112.0
9.00	67658.0	0.0	3.0	1118.0	207.0	29.9	7.2	8613.0	0.0	26.5	10.6	3.6	1.1	0.0	77677.8	1112.0
10.00	67180.0	0.0	3.5	1116.0	261.0	40.4	11.5	8946.0	0.1	27.5	10.9	3.7	1.1	0.0	77601.6	1112.0
11.00	67180.0	0.0	3.5	1116.0	261.0	40.4	11.5	8946.0	0.1	27.5	10.9	3.7	1.1	0.0	77601.6	1112.0
12.00	67180.0	0.0	3.5	1116.0	261.0	40.4	11.5	8946.0	0.1	27.5	10.9	3.7	1.1	0.0	77601.6	1112.0
13.00	67165.0	0.0	3.6	1116.0	275.0	43.6	13.5	8941.0	0.1	27.5	10.8	3.7	1.1	0.0	77600.7	1113.0
14.00	67126.0	0.0	3.8	1116.0	312.0	51.9	18.5	8927.0	0.1	27.4	10.7	3.7	1.1	0.0	77598.0	1116.0
15.00	67126.0	0.0	3.8	1116.0	312.0	51.9	18.5	8927.0	0.1	27.4	10.7	3.7	1.1	0.0	77598.0	1116.0
16.00	67126.0	0.0	3.8	1116.0	312.0	51.9	18.5	8927.0	0.1	27.4	10.7	3.7	1.1	0.0	77598.0	1116.0
17.00	67110.0	0.0	3.9	1116.0	327.0	55.2	21.4	8922.0	0.1	27.4	10.7	3.7	1.1	0.0	77598.3	1116.0
18.00	67082.0	0.0	4.0	1116.0	353.0	61.2	26.6	8912.0	0.1	27.4	10.7	3.6	1.1	0.0	77597.5	1115.0
19.00	67082.0	0.0	4.0	1116.0	353.0	61.2	26.6	8912.0	0.1	27.4	10.7	3.6	1.1	0.0	77597.5	1115.0
20.00	67082.0	0.0	4.0	1116.0	353.0	61.2	26.6	8912.0	0.1	27.4	10.7	3.6	1.1	0.0	77597.5	1115.0
21.00	67069.0	0.0	4.0	1116.0	368.0	64.5	30.5	8896.0	0.1	27.3	10.7	3.6	1.1	0.0	77590.6	1123.0
22.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
23.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
24.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
25.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
26.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
27.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
28.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
29.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
30.00	67053.0	0.0	4.1	1117.0	386.0	68.6	35.4	8876.0	0.2	27.2	10.6	3.6	1.0	0.0	77582.5	1132.0
30.00	129704.4	144.0	6.9	2091.7	704.9	123.7	58.4	17124.3	0.1	39.9	9.1	2.2	0.3	1.2	150010.8	1097.1

HWR-4
MEU5(U,TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	135.3	4.3
FINAL CORE	69.7	130.0
ANNUAL EQUILIBRIUM	69.7	68.7
30 YR CUMULATIVE	2173.3	2141.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	605.7	7.8
FINAL CORE	73.4	91.7
ANNUAL EQUILIBRIUM	73.4	33.3
30 YR CUMULATIVE	3749.4	1581.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	550.8	6.5
FINAL CORE	50.5	54.7
ANNUAL EQUILIBRIUM	50.5	16.4
30 YR CUMULATIVE	2987.0	1012.5
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1.1
FINAL CORE	0.0	29.9
ANNUAL EQUILIBRIUM	0.0	22.5
30 YR CUMULATIVE	0.0	658.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1.4
FINAL CORE	0.0	37.0
ANNUAL EQUILIBRIUM	0.0	32.1
30 YR CUMULATIVE	0.0	924.6
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	30.4
FINAL CORE	805.6	1539.8
ANNUAL EQUILIBRIUM	805.6	829.4
30 YR CUMULATIVE	19963.7	23871.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	2407.1	31.5
FINAL CORE	303.2	387.3
ANNUAL EQUILIBRIUM	303.2	145.2
30 YR CUMULATIVE	15189.3	6641.0

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	13700.0
THERMAL EFFICIENCY	0.313

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

HWR-4
MEU5(U,TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	136018.0	0.0	0.0	0.0	0.0	3033.0	0.0	12080.0	0.0	0.0	0.0	0.0	0.0	0.0	151131.0	0.0
1.00	4389.0	0.0	0.0	0.0	0.0	97.5	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	4876.5	0.0
2.00	72398.0	0.0	0.0	0.0	0.0	1609.0	0.0	6435.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.0	0.0
3.00	72346.0	0.0	0.1	37.3	2.4	1595.0	8.8	6640.0	0.0	0.0	0.0	0.0	0.0	0.0	80629.4	0.0
4.00	71092.0	0.0	1.5	622.0	39.8	832.0	147.0	7708.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.3	0.0
5.00	71092.0	0.0	1.5	622.0	39.8	832.0	147.0	7708.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.3	0.0
6.00	71092.0	0.0	1.5	622.0	39.8	832.0	147.0	7708.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.3	0.0
7.00	70988.0	0.0	1.7	668.0	51.3	777.0	159.0	7798.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.9	0.0
8.00	70518.0	0.0	2.5	873.0	103.0	530.0	215.0	8201.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.5	0.0
9.00	70518.0	0.0	2.5	873.0	103.0	530.0	215.0	8201.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.5	0.0
10.00	70518.0	0.0	2.5	873.0	103.0	530.0	215.0	8201.0	0.0	0.0	0.0	0.0	0.0	0.0	80442.5	0.0
11.00	70444.0	0.0	2.7	901.0	122.0	498.0	225.0	8249.0	0.0	0.0	0.0	0.0	0.0	0.0	80441.7	0.0
12.00	70725.0	0.0	3.2	967.0	166.0	424.0	248.0	8359.0	0.0	0.0	0.0	0.0	0.0	0.0	80892.2	0.0
13.00	70725.0	0.0	3.2	967.0	166.0	424.0	248.0	8359.0	0.0	0.0	0.0	0.0	0.0	0.0	80892.2	0.0
14.00	70725.0	0.0	3.2	967.0	166.0	424.0	248.0	8359.0	0.0	0.0	0.0	0.0	0.0	0.0	80892.2	0.0
15.00	70216.0	0.0	3.3	982.0	189.0	410.0	258.0	8382.0	0.0	0.0	0.0	0.0	0.0	0.0	80440.3	0.0
16.00	70135.0	0.0	3.5	1002.0	220.0	391.0	272.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80437.5	0.0
17.00	70135.0	0.0	3.5	1002.0	220.0	391.0	272.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80437.5	0.0
18.00	70135.0	0.0	3.5	1002.0	220.0	391.0	272.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80437.5	0.0
19.00	70099.0	0.0	3.6	1009.0	246.0	386.0	283.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80440.6	0.0
20.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
21.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
22.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
23.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
24.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
25.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
26.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
27.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
28.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
29.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0
30.00	70069.0	0.0	3.7	1015.0	267.0	382.0	293.0	8414.0	0.0	0.0	0.0	0.0	0.0	0.0	80443.7	0.0

HWR-4
MEU5(U,TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	4284.0	0.0	0.1	38.3	0.7	39.7	9.0	382.0	0.0	1.2	0.4	0.2	0.0	0.0	4755.6	70.0
2.00	71407.0	0.0	1.6	639.0	12.0	661.0	150.0	6374.0	0.5	19.6	6.8	2.6	0.7	0.0	79274.6	1167.0
3.00	71407.0	0.0	1.6	639.0	12.0	661.0	150.0	6374.0	0.5	19.6	6.8	2.6	0.7	0.0	79274.6	1167.0
4.00	71407.0	0.0	1.6	639.0	12.0	661.0	150.0	6374.0	0.5	19.6	6.8	2.6	0.7	0.0	79274.6	1167.0
5.00	71156.0	0.0	1.8	685.0	29.0	601.0	163.0	6615.0	0.6	20.3	7.2	2.7	0.7	0.0	79282.1	1159.0
6.00	70024.0	0.0	2.6	895.0	106.0	331.0	220.0	7705.0	1.2	23.3	8.8	3.1	0.8	0.0	79320.6	1121.0
7.00	70024.0	0.0	2.6	895.0	106.0	331.0	220.0	7705.0	1.2	23.3	8.8	3.1	0.8	0.0	79320.6	1121.0
8.00	70024.0	0.0	2.6	895.0	106.0	331.0	220.0	7705.0	1.2	23.3	8.8	3.1	0.8	0.0	79320.6	1121.0
9.00	69835.0	0.0	2.8	930.0	129.0	290.0	232.0	7856.0	1.3	23.8	9.0	3.1	0.8	0.0	79312.6	1129.0
10.00	69503.0	0.0	3.3	992.0	170.0	219.0	254.0	8122.0	1.4	24.7	9.3	3.2	0.9	0.0	79302.6	1140.0
11.00	69503.0	0.0	3.3	992.0	170.0	219.0	254.0	8122.0	1.4	24.7	9.3	3.2	0.9	0.0	79302.6	1140.0
12.00	69503.0	0.0	3.3	992.0	170.0	219.0	254.0	8122.0	1.4	24.7	9.3	3.2	0.9	0.0	79302.6	1140.0
13.00	69383.0	0.0	3.5	1035.0	198.0	203.0	266.0	8197.0	1.4	24.9	9.4	3.2	0.9	0.0	79325.2	1141.0
14.00	69204.0	0.0	3.7	1081.0	227.0	186.0	279.0	8278.0	1.5	25.1	9.5	3.2	0.9	0.0	79298.8	1042.0
15.00	69204.0	0.0	3.7	1081.0	227.0	186.0	279.0	8278.0	1.5	25.1	9.5	3.2	0.9	0.0	79298.8	1042.0
16.00	69204.0	0.0	3.7	1081.0	227.0	186.0	279.0	8278.0	1.5	25.1	9.5	3.2	0.9	0.0	79298.8	1042.0
17.00	69177.0	0.0	3.8	1057.0	255.0	183.0	292.0	8312.0	1.5	25.2	9.6	3.2	0.9	0.0	79320.1	1141.0
18.00	69160.0	0.0	3.9	1041.0	273.0	181.0	300.0	8333.0	1.5	25.3	9.6	3.2	0.9	0.0	79332.3	1110.0
19.00	69160.0	0.0	3.9	1041.0	273.0	181.0	300.0	8333.0	1.5	25.3	9.6	3.2	0.9	0.0	79332.3	1110.0
20.00	69160.0	0.0	3.9	1041.0	273.0	181.0	300.0	8333.0	1.5	25.3	9.6	3.2	0.9	0.0	79332.3	1110.0
21.00	69089.0	0.0	4.0	1044.0	302.0	182.0	315.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79309.3	1141.0
22.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
23.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
24.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
25.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
26.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
27.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
28.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
29.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
30.00	69063.0	0.0	4.0	1045.0	312.0	183.0	320.0	8333.0	1.6	25.2	9.5	3.2	0.9	0.0	79300.3	1141.0
30.00	130723.2	141.3	6.7	1798.9	543.0	488.0	582.3	15713.3	0.9	35.7	7.9	1.9	0.3	11.6	150054.4	1048.8

HWR-5
LEU5,PU(U)-RUPU

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	171.2	0.0
FINAL CORE	76.6	44.8
ANNUAL EQUILIBRIUM	76.6	0.0
30 YR CUMULATIVE	2654.0	96.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.6	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	188.8
FINAL CORE	216.6	516.9
ANNUAL EQUILIBRIUM	216.6	230.7
30 YR CUMULATIVE	5475.2	7350.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	255.0
FINAL CORE	475.7	1132.8
ANNUAL EQUILIBRIUM	475.7	522.4
30 YR CUMULATIVE	10883.7	15084.2
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	937.3	19.4
FINAL CORE	419.0	435.5
ANNUAL EQUILIBRIUM	419.0	81.0
30 YR CUMULATIVE	14527.8	3330.9

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	14740.0
THERMAL EFFICIENCY	0.313

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

HWR-5
LEU5,PU(U)-RUPU
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	1181.0	0.0	164875.0	0.0	0.0	0.0	0.0	0.0	0.0	166056.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	661.0	0.0	92304.0	0.0	0.0	0.0	0.0	0.0	0.0	92965.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	1247.0	0.0	174158.0	0.0	0.0	0.0	0.0	0.0	0.0	175405.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	875.0	0.0	122193.0	0.1	95.3	34.1	5.7	1.5	0.0	123204.6	0.0
4.00	0.0	0.0	0.0	0.0	0.0	545.0	0.0	76111.0	0.1	180.0	64.3	10.8	2.8	0.0	76913.8	0.0
5.00	0.0	0.0	0.0	0.0	0.0	545.0	0.0	76111.0	0.1	180.0	64.3	10.8	2.8	0.0	76913.8	0.0
6.00	0.0	0.0	0.0	0.0	0.0	545.0	0.0	76111.0	0.1	180.0	64.3	10.8	2.8	0.0	76913.8	0.0
7.00	0.0	0.0	0.0	0.0	0.0	545.0	0.0	76111.0	0.1	180.0	64.3	10.8	2.8	0.0	76913.8	0.0
8.00	0.0	0.0	0.0	0.0	0.0	545.0	0.0	76111.0	0.1	180.0	64.3	10.8	2.8	0.0	76913.8	0.0
9.00	0.0	0.0	0.0	0.0	0.0	545.0	0.0	76111.0	0.1	180.0	64.3	10.8	2.8	0.0	76913.8	0.0
10.00	0.0	0.0	0.0	0.0	0.0	529.0	0.0	73810.0	0.3	210.0	189.0	40.1	37.0	0.0	74815.3	0.0
11.00	0.0	0.0	0.0	0.0	0.0	525.0	0.0	73270.0	0.4	217.0	219.0	47.0	45.1	0.0	74323.4	0.0
12.00	0.0	0.0	0.0	0.0	0.0	525.0	0.0	73270.0	0.4	217.0	219.0	47.0	45.1	0.0	74323.4	0.0
13.00	0.0	0.0	0.0	0.0	0.0	525.0	0.0	73270.0	0.4	217.0	219.0	47.0	45.1	0.0	74323.4	0.0
14.00	0.0	0.0	0.0	0.0	0.0	525.0	0.0	73270.0	0.4	217.0	219.0	47.0	45.1	0.0	74323.4	0.0
15.00	0.0	0.0	0.0	0.0	0.0	525.0	0.0	73270.0	0.4	217.0	219.0	47.0	45.1	0.0	74323.4	0.0
16.00	0.0	0.0	0.0	0.0	0.0	525.0	0.0	73270.0	0.4	217.0	219.0	47.0	45.1	0.0	74323.4	0.0
17.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73638.0	0.5	220.0	240.0	51.2	77.5	0.0	74755.2	0.0
18.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
19.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
20.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
21.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
22.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
23.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
24.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
25.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
26.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
27.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
28.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
29.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0
30.00	0.0	0.0	0.0	0.0	0.0	528.0	0.0	73700.0	0.5	221.0	243.0	51.9	83.0	0.0	74827.4	0.0

HWR-5
LEU5,PU(U)-RUPU
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	24.4	64.8	91571.0	0.2	223.0	79.7	14.9	3.5	0.9	91982.3	764.0
2.00	0.0	0.0	0.0	0.0	0.0	460.0	122.0	172775.0	0.3	420.0	150.0	28.0	6.6	1.8	173963.6	1441.0
3.00	0.0	0.0	0.0	0.0	0.0	323.0	85.9	121357.0	0.2	295.0	106.0	19.7	4.6	1.2	122192.5	1012.0
4.00	0.0	0.0	0.0	0.0	0.0	202.0	53.6	75761.0	0.1	184.0	65.9	12.3	2.9	0.8	76282.4	632.0
5.00	0.0	0.0	0.0	0.0	0.0	164.0	56.1	75513.0	0.2	201.0	124.0	27.2	18.7	0.8	76104.9	809.0
6.00	0.0	0.0	0.0	0.0	0.0	95.4	60.8	75055.0	0.4	231.0	233.0	54.9	48.0	1.6	75780.0	1134.0
7.00	0.0	0.0	0.0	0.0	0.0	95.4	60.8	75055.0	0.4	231.0	233.0	54.9	48.0	1.6	75780.0	1134.0
8.00	0.0	0.0	0.0	0.0	0.0	95.4	60.8	75055.0	0.4	231.0	233.0	54.9	48.0	1.6	75780.0	1134.0
9.00	0.0	0.0	0.0	0.0	0.0	95.4	60.8	75055.0	0.4	231.0	233.0	54.9	48.0	1.6	75780.0	1134.0
10.00	0.0	0.0	0.0	0.0	0.0	95.4	60.8	75055.0	0.4	231.0	233.0	54.9	48.0	1.6	75780.0	1134.0
11.00	0.0	0.0	0.0	0.0	0.0	95.4	60.8	75055.0	0.4	231.0	233.0	54.9	48.0	1.6	75780.0	1134.0
12.00	0.0	0.0	0.0	0.0	0.0	96.6	69.8	73380.0	0.5	227.0	242.0	57.0	71.0	1.6	74145.4	1135.0
13.00	0.0	0.0	0.0	0.0	0.0	97.3	75.0	72397.0	0.5	225.0	248.0	58.2	84.5	1.6	73187.0	1136.0
14.00	0.0	0.0	0.0	0.0	0.0	97.3	75.0	72397.0	0.5	225.0	248.0	58.2	84.5	1.6	73187.0	1136.0
15.00	0.0	0.0	0.0	0.0	0.0	97.3	75.0	72397.0	0.5	225.0	248.0	58.2	84.5	1.6	73187.0	1136.0
16.00	0.0	0.0	0.0	0.0	0.0	97.3	75.0	72397.0	0.5	225.0	248.0	58.2	84.5	1.6	73187.0	1136.0
17.00	0.0	0.0	0.0	0.0	0.0	97.3	75.0	72397.0	0.5	225.0	248.0	58.2	84.5	1.6	73187.0	1136.0
18.00	0.0	0.0	0.0	0.0	0.0	97.3	75.0	72397.0	0.5	225.0	248.0	58.2	84.5	1.6	73187.0	1136.0
19.00	0.0	0.0	0.0	0.0	0.0	100.0	87.7	72689.0	0.5	228.0	256.0	60.6	107.0	1.6	73530.3	1136.0
20.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
21.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
22.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
23.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
24.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
25.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
26.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
27.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
28.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
29.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
30.00	0.0	0.0	0.0	0.0	0.0	102.0	93.7	72826.0	0.5	229.0	260.0	61.7	107.0	1.6	73681.4	1136.0
30.00	0.0	0.0	0.0	0.0	0.0	548.8	98.1	162570.1	0.8	518.0	558.7	133.3	216.6	1.6	164645.6	1378.1

HWP-6
MEU5 (U,TH) RUF,X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	131.5	0.0
FINAL CORE	25.0	124.6
ANNUAL EQUILIBRIUM	25.0	24.2
30 YR CUMULATIVE	821.7	794.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	754.4	0.0
FINAL CORE	63.1	130.7
ANNUAL EQUILIBRIUM	61.3	9.1
30 YR CUMULATIVE	2653.5	429.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	685.8	0.0
FINAL CORE	50.5	83.6
ANNUAL EQUILIBRIUM	48.9	3.0
30 YR CUMULATIVE	2240.4	211.7
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	53.9
ANNUAL EQUILIBRIUM	0.0	12.2
30 YR CUMULATIVE	0.0	373.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	81.2
ANNUAL EQUILIBRIUM	0.0	23.2
30 YR CUMULATIVE	0.0	682.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	295.2	1538.8
ANNUAL EQUILIBRIUM	295.2	301.6
30 YR CUMULATIVE	7307.1	9646.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	2998.4	0.0
FINAL CORE	254.8	546.0
ANNUAL EQUILIBRIUM	247.6	41.7
30 YR CUMULATIVE	10650.0	1880.1

NUMBER OF BATCHES	1
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	37000.0
THERMAL EFFICIENCY	0.313

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

HWR-6
MEU5 (U,TH) RUF,X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	132240.0	0.0	0.0	0.0	0.0	3778.0	0.0	15113.0	0.0	0.0	0.0	0.0	0.0	0.0	151131.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	12137.0	0.0	0.0	0.0	0.0	347.0	0.0	1387.0	0.0	0.0	0.0	0.0	0.0	0.0	13871.0	0.0
4.00	26084.0	0.0	0.0	0.0	0.0	745.0	0.0	2981.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.0	0.0
5.00	25774.0	0.0	0.7	135.0	19.7	582.0	39.1	3260.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.5	0.0
6.00	25300.0	0.0	1.7	341.0	49.8	334.0	98.8	3685.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.3	0.0
7.00	25300.0	0.0	1.7	341.0	49.8	334.0	98.8	3685.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.3	0.0
8.00	25300.0	0.0	1.7	341.0	49.8	334.0	98.8	3685.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.3	0.0
9.00	25300.0	0.0	1.7	341.0	49.9	334.0	98.8	3685.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.3	0.0
10.00	25300.0	0.0	1.7	341.0	49.8	334.0	98.8	3685.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.3	0.0
11.00	25300.0	0.0	1.7	341.0	49.8	334.0	98.8	3685.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.3	0.0
12.00	25265.0	0.0	1.8	350.0	66.2	326.0	110.0	3691.0	0.0	0.0	0.0	0.0	0.0	0.0	29810.0	0.0
13.00	25192.0	0.0	2.1	369.0	100.0	309.0	133.0	3704.0	0.0	0.0	0.0	0.0	0.0	0.0	29809.1	0.0
14.00	25192.0	0.0	2.1	369.0	100.0	309.0	133.0	3704.0	0.0	0.0	0.0	0.0	0.0	0.0	29809.1	0.0
15.00	25192.0	0.0	2.1	369.0	100.0	309.0	133.0	3704.0	0.0	0.0	0.0	0.0	0.0	0.0	29809.1	0.0
16.00	25192.0	0.0	2.1	369.0	100.0	309.0	133.0	3704.0	0.0	0.0	0.0	0.0	0.0	0.0	29809.1	0.0
17.00	25192.0	0.0	2.1	369.0	100.0	309.0	133.0	3704.0	0.0	0.0	0.0	0.0	0.0	0.0	29809.1	0.0
18.00	25192.0	0.0	2.1	369.0	100.0	309.0	133.0	3704.0	0.0	0.0	0.0	0.0	0.0	0.0	29809.1	0.0
19.00	25181.0	0.0	2.2	370.0	108.0	310.0	140.0	3697.0	0.0	0.0	0.0	0.0	0.0	0.0	29808.2	0.0
20.00	25151.0	0.0	2.3	372.0	132.0	312.0	142.0	3678.0	0.0	0.0	0.0	0.0	0.0	0.0	29789.3	0.0
21.00	25151.0	0.0	2.3	372.0	132.0	312.0	142.0	3678.0	0.0	0.0	0.0	0.0	0.0	0.0	29789.3	0.0
22.00	25151.0	0.0	2.3	372.0	132.0	312.0	142.0	3678.0	0.0	0.0	0.0	0.0	0.0	0.0	29789.3	0.0
23.00	25151.0	0.0	2.3	372.0	132.0	312.0	142.0	3678.0	0.0	0.0	0.0	0.0	0.0	0.0	29789.3	0.0
24.00	25151.0	0.0	2.3	372.0	132.0	312.0	142.0	3678.0	0.0	0.0	0.0	0.0	0.0	0.0	29789.3	0.0
25.00	25151.0	0.0	2.3	372.0	132.0	312.0	142.0	3678.0	0.0	0.0	0.0	0.0	0.0	0.0	29789.3	0.0
26.00	25146.0	0.0	2.3	372.0	155.0	317.0	192.0	3649.0	0.0	0.0	0.0	0.0	0.0	0.0	29833.3	0.0
27.00	25124.0	0.0	2.3	372.0	166.0	321.0	216.0	3630.0	0.0	0.0	0.0	0.0	0.0	0.0	29831.3	0.0
28.00	25124.0	0.0	2.3	372.0	166.0	321.0	216.0	3630.0	0.0	0.0	0.0	0.0	0.0	0.0	29831.3	0.0
29.00	25124.0	0.0	2.3	372.0	166.0	321.0	216.0	3630.0	0.0	0.0	0.0	0.0	0.0	0.0	29831.3	0.0
30.00	25124.0	0.0	2.3	372.0	166.0	321.0	216.0	3630.0	0.0	0.0	0.0	0.0	0.0	0.0	29831.3	0.0

HWR-6
MEU5 (U,TH) RUF,X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	11723.0	0.0	0.8	162.0	23.7	40.3	47.0	1354.0	0.7	4.6	3.0	1.2	0.9	0.0	13361.2	509.0
4.00	25195.0	0.0	1.7	349.0	51.0	86.7	101.0	2910.0	1.5	9.9	6.5	2.5	2.0	0.0	28716.8	1093.0
5.00	25195.0	0.0	1.7	349.0	51.0	86.7	101.0	2910.0	1.5	9.9	6.5	2.5	2.0	0.0	28716.8	1093.0
6.00	25195.0	0.0	1.7	349.0	51.0	86.7	101.0	2910.0	1.5	9.9	6.5	2.5	2.0	0.0	28716.8	1093.0
7.00	25195.0	0.0	1.7	349.0	51.0	86.7	101.0	2910.0	1.5	9.9	6.5	2.5	2.0	0.0	28716.8	1093.0
8.00	25195.0	0.0	1.7	349.0	51.0	86.7	101.0	2910.0	1.5	9.9	6.5	2.5	2.0	0.0	28716.8	1093.0
9.00	25195.0	0.0	1.7	349.0	51.0	86.7	101.0	2910.0	1.5	9.9	6.5	2.5	2.0	0.0	28716.8	1093.0
10.00	24664.0	0.0	1.9	360.0	72.0	71.2	115.0	3209.0	2.0	10.9	7.4	2.8	2.2	0.0	28518.4	1108.0
11.00	24316.0	0.0	2.2	378.0	103.0	47.5	137.0	3666.0	2.7	12.4	8.7	3.2	2.5	0.0	28679.2	1132.0
12.00	24316.0	0.0	2.2	378.0	103.0	47.5	137.0	3666.0	2.7	12.4	8.7	3.2	2.5	0.0	28679.2	1132.0
13.00	24316.0	0.0	2.2	378.0	103.0	47.5	137.0	3666.0	2.7	12.4	8.7	3.2	2.5	0.0	28679.2	1132.0
14.00	24316.0	0.0	2.2	378.0	103.0	47.5	137.0	3666.0	2.7	12.4	8.7	3.2	2.5	0.0	28679.2	1132.0
15.00	24316.0	0.0	2.2	378.0	103.0	47.5	137.0	3666.0	2.7	12.4	8.7	3.2	2.5	0.0	28679.2	1132.0
16.00	24316.0	0.0	2.2	378.0	103.0	47.5	137.0	3666.0	2.7	12.4	8.7	3.2	2.5	0.0	28679.2	1132.0
17.00	24314.0	0.0	2.3	379.0	115.0	49.2	147.0	3649.0	2.8	12.3	8.6	3.2	2.5	0.0	28684.9	1126.0
18.00	24310.0	0.0	2.4	380.0	139.0	52.6	167.0	3615.0	3.0	12.2	8.4	3.2	2.4	0.0	28695.2	1115.0
19.00	24310.0	0.0	2.4	380.0	139.0	52.6	167.0	3615.0	3.0	12.2	8.4	3.2	2.4	0.0	28695.2	1115.0
20.00	24310.0	0.0	2.4	380.0	139.0	52.6	167.0	3615.0	3.0	12.2	8.4	3.2	2.4	0.0	28695.2	1115.0
21.00	24310.0	0.0	2.4	380.0	139.0	52.6	167.0	3615.0	3.0	12.2	8.4	3.2	2.4	0.0	28695.2	1115.0
22.00	24310.0	0.0	2.4	380.0	139.0	52.6	167.0	3615.0	3.0	12.2	8.4	3.2	2.4	0.0	28695.2	1115.0
23.00	24310.0	0.0	2.4	380.0	139.0	52.6	167.0	3615.0	3.0	12.2	8.4	3.2	2.4	0.0	28695.2	1115.0
24.00	24302.0	0.0	2.4	381.0	144.0	53.9	175.0	3609.0	3.1	12.2	8.4	3.2	2.4	0.0	28696.6	1116.0
25.00	24279.0	0.0	2.4	382.0	157.0	57.6	195.0	3590.0	3.4	12.2	8.4	3.1	2.4	0.0	28692.5	1117.0
26.00	24279.0	0.0	2.4	382.0	157.0	57.6	195.0	3590.0	3.4	12.2	8.4	3.1	2.4	0.0	28692.5	1117.0
27.00	24279.0	0.0	2.4	382.0	157.0	57.6	195.0	3590.0	3.4	12.2	8.4	3.1	2.4	0.0	28692.5	1117.0
28.00	24279.0	0.0	2.4	382.0	157.0	57.6	195.0	3590.0	3.4	12.2	8.4	3.1	2.4	0.0	28692.5	1117.0
29.00	24279.0	0.0	2.4	382.0	157.0	57.6	195.0	3590.0	3.4	12.2	8.4	3.1	2.4	0.0	28692.5	1117.0
30.00	24279.0	0.0	2.4	382.0	157.0	57.6	195.0	3590.0	3.4	12.2	8.4	3.1	2.4	0.0	28692.5	1117.0
30.00	125248.9	118.2	10.3	1820.6	871.7	688.0	1222.7	18198.2	8.0	59.2	24.0	8.7	2.4	45.7	148326.3	2757.7

HWR -7
MEU/TH ONCE THROUGH

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	136.2	0.0
FINAL CORE	66.3	132.6
ANNUAL EQUILIBRIUM	66.3	65.3
30 YR CUMULATIVE	2056.2	2023.5
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	565.9	0.0
FINAL CORE	275.4	316.6
ANNUAL EQUILIBRIUM	275.4	86.6
30 YR CUMULATIVE	8543.4	2825.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	514.5	0.0
FINAL CORE	250.3	274.0
ANNUAL EQUILIBRIUM	250.3	69.0
30 YR CUMULATIVE	7766.6	2273.9
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	41.3
ANNUAL EQUILIBRIUM	0.0	26.2
30 YR CUMULATIVE	0.0	800.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	41.3
ANNUAL EQUILIBRIUM	0.0	26.2
30 YR CUMULATIVE	0.0	800.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	623.0
ANNUAL EQUILIBRIUM	0.0	495.2
30 YR CUMULATIVE	0.0	14969.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	2249.2	0.0
FINAL CORE	1094.4	1265.9
ANNUAL EQUILIBRIUM	1094.4	350.0
30 YR CUMULATIVE	33955.6	11405.6
NUMBER OF BATCHES		1
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.260
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		15000.0
THERMAL EFFICIENCY		0.313

HWR-7
MEU/TH ONCE THROUGH
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	136938.0	0.0	0.0	0.0	0.0	2834.0	0.0	11340.0	0.0	0.0	0.0	0.0	0.0	0.0	151112.0	0.0
1.00	64637.0	0.0	0.0	0.0	0.0	1338.0	0.0	5352.0	0.0	0.0	0.0	0.0	0.0	0.0	71327.0	0.0
2.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
3.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
4.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
5.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
6.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
7.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
8.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
9.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
10.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
11.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
12.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
13.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
14.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
15.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
16.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
17.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
18.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
19.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
20.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
21.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
22.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
23.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
24.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
25.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
26.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
27.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
28.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0
29.00	66636.0	0.0	0.0	0.0	0.0	1379.0	0.0	5518.0	0.0	0.0	0.0	0.0	0.0	0.0	73533.0	0.0

HWR-7
MEU/TH ONCE THROUGH
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	63657.0	0.0	0.0	605.0	45.0	428.0	142.0	5268.0	0.0	33.0	0.0	0.0	0.0	0.0	70178.0	0.0
3.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
4.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
5.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
6.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
7.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
8.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
9.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
10.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
11.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
12.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
13.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
14.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
15.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
16.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
17.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
18.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
19.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
20.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
21.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
22.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
23.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
24.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
25.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
26.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
27.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
28.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
29.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
30.00	65625.0	0.0	0.0	624.0	45.0	441.0	146.0	5432.0	0.0	33.0	0.0	0.0	0.0	0.0	72346.0	0.0
30.00	133321.0	0.0	0.0	785.0	29.0	1595.0	149.0	11037.0	0.0	52.0	0.0	0.0	0.0	0.0	146968.0	1234.0

LMFBR-1
HETEROGENEOUS PU,U/U/U/U CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	1.1	0.0
FINAL CORE	1.1	0.0
ANNUAL EQUILIBRIUM	0.4	0.0
30 YR CUMULATIVE	12.2	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	4694.1	4304.2
FINAL CORE	4742.2	4331.1
ANNUAL EQUILIBRIUM	1541.6	1367.9
30 YR CUMULATIVE	50571.1	44832.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	6070.5	5786.5
FINAL CORE	6132.9	5821.1
ANNUAL EQUILIBRIUM	1993.8	1870.4
30 YR CUMULATIVE	65399.2	61157.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	56.5	42.2
FINAL CORE	56.4	42.3
ANNUAL EQUILIBRIUM	18.9	12.1
30 YR CUMULATIVE	601.8	398.6
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		56300.0
THERMAL EFFICIENCY		0.365

LMFBR-1
HETEROGENEOUS PU/U/U/U CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8656.0	0.0	1359.0	409.7	205.7	49.1	0.0	10698.3	0.0
0.0	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8656.0	0.0	1359.0	409.7	205.7	49.1	0.0	10698.3	0.0
0.0	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8656.0	0.0	1359.0	409.7	205.7	49.1	0.0	10698.3	0.0
1.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8614.0	0.0	1388.0	418.4	210.0	50.1	0.0	10699.3	0.0
2.00	0.0	0.0	0.0	0.0	0.0	18.7	0.0	8586.0	0.0	1402.0	422.7	212.1	50.6	0.0	10692.1	0.0
3.00	0.0	0.0	0.0	0.0	0.0	18.9	0.0	8674.0	0.0	1348.0	406.3	203.9	48.7	0.0	10699.8	0.0
4.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8641.0	0.0	1370.0	412.9	207.2	49.5	0.0	10699.4	0.0
5.00	0.0	0.0	0.0	0.0	0.0	18.9	0.0	8581.0	0.0	1408.0	424.4	213.0	50.8	0.0	10696.1	0.0
6.00	0.0	0.0	0.0	0.0	0.0	19.0	0.0	8705.0	0.0	1328.0	400.2	200.9	47.9	0.0	10701.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8652.0	0.0	1361.0	410.2	205.9	49.1	0.0	10697.1	0.0
8.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8550.0	0.0	1425.0	429.7	215.7	51.5	0.0	10690.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	18.9	0.0	8686.0	0.0	1339.0	403.8	202.6	48.4	0.0	10698.7	0.0
10.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8654.0	0.0	1360.0	410.0	205.7	49.1	0.0	10697.7	0.0
11.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8557.0	0.0	1420.0	428.1	214.9	51.3	0.0	10689.9	0.0
12.00	0.0	0.0	0.0	0.0	0.0	19.0	0.0	8705.0	0.0	1328.0	400.2	200.9	47.9	0.0	10701.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8652.0	0.0	1361.0	410.2	205.9	49.1	0.0	10697.1	0.0
14.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8550.0	0.0	1425.0	429.7	215.7	51.5	0.0	10690.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	18.9	0.0	8686.0	0.0	1339.0	403.8	202.6	48.4	0.0	10698.7	0.0
16.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8654.0	0.0	1360.0	410.0	205.7	49.1	0.0	10697.7	0.0
17.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8557.0	0.0	1420.0	428.1	214.9	51.3	0.0	10689.9	0.0
18.00	0.0	0.0	0.0	0.0	0.0	19.0	0.0	8705.0	0.0	1328.0	400.2	200.9	47.9	0.0	10701.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8652.0	0.0	1361.0	410.2	205.9	49.1	0.0	10697.1	0.0
20.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8550.0	0.0	1425.0	429.7	215.7	51.5	0.0	10690.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	18.9	0.0	8686.0	0.0	1339.0	403.8	202.6	48.4	0.0	10698.7	0.0
22.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8654.0	0.0	1360.0	410.0	205.7	49.1	0.0	10697.7	0.0
23.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8557.0	0.0	1420.0	428.1	214.9	51.3	0.0	10689.9	0.0
24.00	0.0	0.0	0.0	0.0	0.0	19.0	0.0	8705.0	0.0	1328.0	400.2	200.9	47.9	0.0	10701.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8652.0	0.0	1361.0	410.2	205.9	49.1	0.0	10697.1	0.0
26.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8550.0	0.0	1425.0	429.7	215.7	51.5	0.0	10690.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	18.9	0.0	8686.0	0.0	1339.0	403.8	202.6	48.4	0.0	10698.7	0.0
28.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	8654.0	0.0	1360.0	410.0	205.7	49.1	0.0	10697.7	0.0
29.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8557.0	0.0	1420.0	428.1	214.9	51.3	0.0	10689.9	0.0

LMFBR-1
HETEROGENEOUS PU/U/U/U CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	16.2	0.0	8480.0	0.0	1317.0	426.0	174.5	52.3	0.0	10465.9	0.0
2.00	0.0	0.0	0.0	0.0	0.0	14.0	0.0	8319.0	0.0	1280.0	439.5	153.3	54.5	0.0	10260.3	0.0
3.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8146.0	0.0	1244.0	453.6	135.4	56.4	0.0	10047.4	0.0
4.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8106.0	0.0	1261.0	461.4	138.3	57.5	0.0	10036.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8098.0	0.0	1273.0	464.7	140.7	57.9	0.0	10046.4	0.0
6.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8167.0	0.0	1239.0	449.8	134.7	55.9	0.0	10058.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8135.0	0.0	1251.0	455.5	136.8	56.7	0.0	10047.1	0.0
8.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8088.0	0.0	1276.0	466.2	141.2	58.1	0.0	10041.6	0.0
9.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	8201.0	0.0	1228.0	443.1	132.9	55.0	0.0	10072.2	0.0
10.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8149.0	0.0	1246.0	452.7	135.9	56.3	0.0	10052.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8062.0	0.0	1286.0	471.7	143.0	58.8	0.0	10033.6	0.0
12.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8181.0	0.0	1234.0	447.0	133.9	55.5	0.0	10063.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8135.0	0.0	1251.0	455.5	136.8	56.7	0.0	10047.1	0.0
14.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8088.0	0.0	1276.0	466.2	141.2	58.1	0.0	10041.6	0.0
15.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	8201.0	0.0	1228.0	443.1	132.9	55.0	0.0	10072.2	0.0
16.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8149.0	0.0	1246.0	452.7	135.9	56.3	0.0	10052.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8062.0	0.0	1286.0	471.7	143.0	58.8	0.0	10033.6	0.0
18.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8181.0	0.0	1234.0	447.0	133.9	55.5	0.0	10063.6	0.0
19.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8135.0	0.0	1251.0	455.5	136.8	56.7	0.0	10047.1	0.0
20.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8088.0	0.0	1276.0	466.2	141.2	58.1	0.0	10041.6	0.0
21.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	8201.0	0.0	1228.0	443.1	132.9	55.0	0.0	10072.2	0.0
22.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8149.0	0.0	1246.0	452.7	135.9	56.3	0.0	10052.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8062.0	0.0	1286.0	471.7	143.0	58.8	0.0	10033.6	0.0
24.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8181.0	0.0	1234.0	447.0	133.9	55.5	0.0	10063.6	0.0
25.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8135.0	0.0	1251.0	455.5	136.8	56.7	0.0	10047.1	0.0
26.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8088.0	0.0	1276.0	466.2	141.2	58.1	0.0	10041.6	0.0
27.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	8201.0	0.0	1228.0	443.1	132.9	55.0	0.0	10072.2	0.0
28.00	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8149.0	0.0	1246.0	452.7	135.9	56.3	0.0	10052.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8062.0	0.0	1286.0	471.7	143.0	58.8	0.0	10033.6	0.0
30.00	0.0	0.0	0.0	0.0	0.0	14.1	0.0	8305.0	0.0	1288.0	442.0	155.7	54.7	0.0	10259.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	14.1	0.0	8305.0	0.0	1288.0	442.0	155.7	54.7	0.0	10259.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	14.1	0.0	8305.0	0.0	1288.0	442.0	155.7	54.7	0.0	10259.5	0.0

LMFBR-1
HETEROGENEOUS PU,U/U/U/U INTERNAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	1.3	0.0
FINAL CORE	1.5	0.0
ANNUAL EQUILIBRIUM	0.4	0.0
30 YR CUMULATIVE	15.6	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	599.2
FINAL CORE	0.0	529.5
ANNUAL EQUILIBRIUM	0.0	249.9
30 YR CUMULATIVE	0.0	8150.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	622.8
FINAL CORE	0.0	549.6
ANNUAL EQUILIBRIUM	0.0	261.7
30 YR CUMULATIVE	0.0	8538.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	62.6	56.5
FINAL CORE	69.2	51.8
ANNUAL EQUILIBRIUM	22.6	17.1
30 YR CUMULATIVE	731.9	561.0
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		56300.0
THERMAL EFFICIENCY		0.365

LMFBR -1
HETEROGENEOUS PU,U/U/U/U INTERNAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	20.9	0.0	9582.0	0.0	0.0	0.0	0.0	0.0	0.0	9602.9	0.0
0.0	0.0	0.0	0.0	0.0	0.0	20.9	0.0	9582.0	0.0	0.0	0.0	0.0	0.0	0.0	9602.9	0.0
0.0	0.0	0.0	0.0	0.0	0.0	20.9	0.0	9582.0	0.0	0.0	0.0	0.0	0.0	0.0	9602.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
2.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
3.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
4.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
6.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
7.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
8.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
9.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
10.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
11.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
12.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
14.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
15.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
17.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
18.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
19.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
20.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
21.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
23.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
24.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
25.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
26.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0
27.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	10217.0	0.0	0.0	0.0	0.0	0.0	0.0	10239.6	0.0
28.00	0.0	0.0	0.0	0.0	0.0	21.7	0.0	9976.0	0.0	0.0	0.0	0.0	0.0	0.0	9997.7	0.0
29.00	0.0	0.0	0.0	0.0	0.0	24.8	0.0	11401.0	0.0	0.0	0.0	0.0	0.0	0.0	11425.8	0.0

LMFBR-1
HETEROGENEOUS PU,U/U/U/U INTERNAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	19.4	0.0	9849.0	0.0	111.0	2.2	0.0	0.0	0.0	9981.6	0.0
2.00	0.0	0.0	0.0	0.0	0.0	20.1	0.0	11117.0	0.0	233.7	8.8	0.0	0.0	0.0	11379.6	0.0
3.00	0.0	0.0	0.0	0.0	0.0	17.0	0.0	9887.0	0.0	254.5	12.7	0.0	0.0	0.0	10171.1	0.0
4.00	0.0	0.0	0.0	0.0	0.0	16.3	0.0	9640.0	0.0	261.7	13.5	0.0	0.0	0.0	9931.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	11005.0	0.0	306.9	15.9	0.0	0.0	0.0	11346.3	0.0
6.00	0.0	0.0	0.0	0.0	0.0	17.0	0.0	9893.0	0.0	250.8	12.3	0.0	0.0	0.0	10173.1	0.0
7.00	0.0	0.0	0.0	0.0	0.0	16.4	0.0	9643.0	0.0	258.3	12.9	0.0	0.0	0.0	9930.6	0.0
8.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	11018.0	0.0	296.3	14.0	0.0	0.0	0.0	11347.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	17.1	0.0	9896.0	0.0	248.8	11.7	0.0	0.0	0.0	10173.6	0.0
10.00	0.0	0.0	0.0	0.0	0.0	16.5	0.0	9647.0	0.0	255.9	12.8	0.0	0.0	0.0	9932.2	0.0
11.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	11008.0	0.0	303.8	15.6	0.0	0.0	0.0	11346.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	17.1	0.0	9897.0	0.0	249.9	11.8	0.0	0.0	0.0	10175.8	0.0
13.00	0.0	0.0	0.0	0.0	0.0	16.4	0.0	9643.0	0.0	258.3	12.9	0.0	0.0	0.0	9930.6	0.0
14.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	11018.0	0.0	296.3	14.0	0.0	0.0	0.0	11347.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	17.1	0.0	9896.0	0.0	248.8	11.7	0.0	0.0	0.0	10173.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	16.5	0.0	9647.0	0.0	255.9	12.8	0.0	0.0	0.0	9932.2	0.0
17.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	11008.0	0.0	303.8	15.6	0.0	0.0	0.0	11346.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	17.1	0.0	9897.0	0.0	249.9	11.8	0.0	0.0	0.0	10175.8	0.0
19.00	0.0	0.0	0.0	0.0	0.0	16.4	0.0	9643.0	0.0	258.3	12.9	0.0	0.0	0.0	9930.6	0.0
20.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	11018.0	0.0	296.3	14.0	0.0	0.0	0.0	11347.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	17.1	0.0	9896.0	0.0	248.8	11.7	0.0	0.0	0.0	10173.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	16.5	0.0	9647.0	0.0	255.9	12.8	0.0	0.0	0.0	9932.2	0.0
23.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	11008.0	0.0	303.8	15.6	0.0	0.0	0.0	11346.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	17.1	0.0	9897.0	0.0	249.9	11.8	0.0	0.0	0.0	10175.8	0.0
25.00	0.0	0.0	0.0	0.0	0.0	16.4	0.0	9643.0	0.0	258.3	12.9	0.0	0.0	0.0	9930.6	0.0
26.00	0.0	0.0	0.0	0.0	0.0	18.8	0.0	11018.0	0.0	296.3	14.0	0.0	0.0	0.0	11347.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	17.1	0.0	9896.0	0.0	248.8	11.7	0.0	0.0	0.0	10173.6	0.0
28.00	0.0	0.0	0.0	0.0	0.0	16.5	0.0	9647.0	0.0	255.9	12.8	0.0	0.0	0.0	9932.2	0.0
29.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	11008.0	0.0	303.8	15.6	0.0	0.0	0.0	11346.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	17.3	0.0	9365.0	0.0	176.5	6.7	0.0	0.0	0.0	9565.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	17.3	0.0	9365.0	0.0	176.5	6.7	0.0	0.0	0.0	9565.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	17.3	0.0	9365.0	0.0	176.5	6.7	0.0	0.0	0.0	9565.5	0.0

LMFBR -1
HETEROGENEOUS PU,U/U/U/U AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.8	0.2
FINAL CORE	0.8	0.2
ANNUAL EQUILIBRIUM	0.3	0.0
30 YR CUMULATIVE	8.7	0.4
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	129.1
FINAL CORE	0.0	130.4
ANNUAL EQUILIBRIUM	0.0	64.2
30 YR CUMULATIVE	0.0	1928.7
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	131.4
FINAL CORE	0.0	132.1
ANNUAL EQUILIBRIUM	0.0	65.5
30 YR CUMULATIVE	0.0	1966.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	40.6	37.8
FINAL CORE	40.6	37.9
ANNUAL EQUILIBRIUM	13.5	12.2
30 YR CUMULATIVE	432.6	392.1
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		56300.0
THERMAL EFFICIENCY		0.365

LMFBR-1
HETEROGENEOUS PU,U/U/U/U AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
1.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
2.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6209.0	0.0	0.0	0.0	0.0	0.0	0.0	6222.5	0.0

LMFBR-1
HETEROGENEOUS PU,U/U/U/U AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	13.1	0.0	6185.0	0.0	22.1	0.1	0.0	0.0	0.0	6220.3	0.0
2.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	42.8	0.8	0.0	0.0	0.0	6217.2	0.0
3.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
4.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
5.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
6.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
7.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
8.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
9.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
10.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
11.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
12.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
14.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
15.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
17.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
18.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
19.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
20.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
21.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
23.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
24.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
25.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
26.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
27.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
28.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
29.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	64.2	1.3	0.0	0.0	0.0	6214.6	0.0
30.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	43.5	0.6	0.0	0.0	0.0	6217.7	0.0
30.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	43.5	0.6	0.0	0.0	0.0	6217.7	0.0
30.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	43.5	0.6	0.0	0.0	0.0	6217.7	0.0

LMFBR -1
HETEROGENEOUS PU,U/U/U/U RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	1.4	0.1
FINAL CORE	1.4	0.0
ANNUAL EQUILIBRIUM	0.3	0.0
30 YR CUMULATIVE	8.4	0.4
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	458.2
FINAL CORE	0.0	492.2
ANNUAL EQUILIBRIUM	0.0	138.1
30 YR CUMULATIVE	0.0	4119.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	474.9
FINAL CORE	0.0	512.2
ANNUAL EQUILIBRIUM	0.0	145.9
30 YR CUMULATIVE	0.0	4336.6
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	71.4	61.7
FINAL CORE	71.4	60.9
ANNUAL EQUILIBRIUM	12.4	9.7
30 YR CUMULATIVE	416.0	332.9
NUMBER OF BATCHES		6
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		56300.0
THERMAL EFFICIENCY		0.365

LMFBR-1
HETEROGENEOUS PU,U/U/U/U RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	5464.0	0.0	0.0	0.0	0.0	0.0	0.0	5475.9	0.0
0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	5464.0	0.0	0.0	0.0	0.0	0.0	0.0	5475.9	0.0
0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	5464.0	0.0	0.0	0.0	0.0	0.0	0.0	5475.9	0.0
0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	5464.0	0.0	0.0	0.0	0.0	0.0	0.0	5475.9	0.0
0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	5464.0	0.0	0.0	0.0	0.0	0.0	0.0	5475.9	0.0
0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	5464.0	0.0	0.0	0.0	0.0	0.0	0.0	5475.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
2.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
3.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
4.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
5.00	0.0	0.0	0.0	0.0	0.0	9.3	0.0	4275.0	0.0	0.0	0.0	0.0	0.0	0.0	4284.3	0.0
6.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
7.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
8.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
9.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
10.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
11.00	0.0	0.0	0.0	0.0	0.0	9.3	0.0	4275.0	0.0	0.0	0.0	0.0	0.0	0.0	4284.3	0.0
12.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
13.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
14.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
15.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
16.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
17.00	0.0	0.0	0.0	0.0	0.0	9.3	0.0	4275.0	0.0	0.0	0.0	0.0	0.0	0.0	4284.3	0.0
18.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
19.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
20.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
21.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
22.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
23.00	0.0	0.0	0.0	0.0	0.0	9.3	0.0	4275.0	0.0	0.0	0.0	0.0	0.0	0.0	4284.3	0.0
24.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
25.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
26.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
27.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
28.00	0.0	0.0	0.0	0.0	0.0	12.4	0.0	5702.0	0.0	0.0	0.0	0.0	0.0	0.0	5714.4	0.0
29.00	0.0	0.0	0.0	0.0	0.0	9.3	0.0	4275.0	0.0	0.0	0.0	0.0	0.0	0.0	4284.3	0.0

LMFBR-1
HETEROGENEOUS PU,U/U/U/U RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	11.8	0.0	5669.0	0.0	28.1	0.3	0.0	0.0	0.0	5709.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	11.1	0.0	5626.0	0.0	65.5	1.5	0.0	0.0	0.0	5704.1	0.0
3.00	0.0	0.0	0.0	0.0	0.0	10.8	0.0	5614.0	0.0	73.7	2.4	0.0	0.0	0.0	5700.9	0.0
4.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	5554.0	0.0	125.2	5.5	0.0	0.0	0.0	5694.6	0.0
5.00	0.0	0.0	0.0	0.0	0.0	7.9	0.0	4201.0	0.0	66.1	2.6	0.0	0.0	0.0	4277.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	10.3	0.0	5588.0	0.0	99.6	4.4	0.0	0.0	0.0	5702.3	0.0
7.00	0.0	0.0	0.0	0.0	0.0	9.6	0.0	5529.0	0.0	143.9	7.8	0.0	0.0	0.0	5690.3	0.0
8.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	5488.0	0.0	170.6	10.6	0.0	0.0	0.0	5678.3	0.0
9.00	0.0	0.0	0.0	0.0	0.0	9.7	0.0	5532.0	0.0	138.1	7.8	0.0	0.0	0.0	5687.6	0.0
10.00	0.0	0.0	0.0	0.0	0.0	7.9	0.0	5476.0	0.0	178.8	11.4	0.0	0.0	0.0	5674.1	0.0
11.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	4182.0	0.0	82.5	3.8	0.0	0.0	0.0	4277.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	10.2	0.0	5581.0	0.0	104.6	4.8	0.0	0.0	0.0	5700.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	9.6	0.0	5529.0	0.0	143.9	7.8	0.0	0.0	0.0	5690.3	0.0
14.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	5488.0	0.0	170.6	10.6	0.0	0.0	0.0	5678.3	0.0
15.00	0.0	0.0	0.0	0.0	0.0	9.7	0.0	5532.0	0.0	138.1	7.8	0.0	0.0	0.0	5687.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	7.9	0.0	5476.0	0.0	178.8	11.4	0.0	0.0	0.0	5674.1	0.0
17.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	4182.0	0.0	82.5	3.8	0.0	0.0	0.0	4277.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	10.2	0.0	5581.0	0.0	104.6	4.8	0.0	0.0	0.0	5700.6	0.0
19.00	0.0	0.0	0.0	0.0	0.0	9.6	0.0	5529.0	0.0	143.9	7.8	0.0	0.0	0.0	5690.3	0.0
20.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	5488.0	0.0	170.6	10.6	0.0	0.0	0.0	5678.3	0.0
21.00	0.0	0.0	0.0	0.0	0.0	9.7	0.0	5532.0	0.0	138.1	7.8	0.0	0.0	0.0	5687.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	7.9	0.0	5476.0	0.0	178.8	11.4	0.0	0.0	0.0	5674.1	0.0
23.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	4182.0	0.0	82.5	3.8	0.0	0.0	0.0	4277.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	10.2	0.0	5581.0	0.0	104.6	4.8	0.0	0.0	0.0	5700.6	0.0
25.00	0.0	0.0	0.0	0.0	0.0	9.6	0.0	5529.0	0.0	143.9	7.8	0.0	0.0	0.0	5690.3	0.0
26.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	5488.0	0.0	170.6	10.6	0.0	0.0	0.0	5678.3	0.0
27.00	0.0	0.0	0.0	0.0	0.0	9.7	0.0	5532.0	0.0	138.1	7.8	0.0	0.0	0.0	5687.6	0.0
28.00	0.0	0.0	0.0	0.0	0.0	7.9	0.0	5476.0	0.0	178.8	11.4	0.0	0.0	0.0	5674.1	0.0
29.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	4182.0	0.0	82.5	3.8	0.0	0.0	0.0	4277.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	10.1	0.0	5365.0	0.0	82.0	3.3	0.0	0.0	0.0	5460.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	10.1	0.0	5365.0	0.0	82.0	3.3	0.0	0.0	0.0	5460.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	10.1	0.0	5365.0	0.0	82.0	3.3	0.0	0.0	0.0	5460.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	10.1	0.0	5365.0	0.0	82.0	3.3	0.0	0.0	0.0	5460.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	10.1	0.0	5365.0	0.0	82.0	3.3	0.0	0.0	0.0	5460.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	10.1	0.0	5365.0	0.0	82.0	3.3	0.0	0.0	0.0	5460.5	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.5	0.0
FINAL CORE	0.5	0.0
ANNUAL EQUILIBRIUM	0.2	0.0
30 YR CUMULATIVE	5.7	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	3211.1	2636.2
FINAL CORE	3305.5	2710.9
ANNUAL EQUILIBRIUM	1060.2	799.9
30 YR CUMULATIVE	35241.5	26860.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	4152.3	3669.9
FINAL CORE	4274.4	3776.6
ANNUAL EQUILIBRIUM	1370.9	1152.6
30 YR CUMULATIVE	45571.4	38542.6
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	26.9	17.4
FINAL CORE	26.6	17.4
ANNUAL EQUILIBRIUM	9.0	4.6
30 YR CUMULATIVE	283.9	153.4

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	101150.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	26.9	0.0	12348.0	0.0	2789.0	840.5	422.1	100.7	0.0	16527.2	0.0
1.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4036.0	0.0	983.7	296.4	148.9	35.5	0.0	5509.3	0.0
2.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	4016.0	0.0	997.5	300.7	150.9	36.0	0.0	5509.8	0.0
3.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
4.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
5.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
6.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
7.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
8.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
9.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
11.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
12.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
13.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
14.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
15.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
16.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
17.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
18.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
19.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
20.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
21.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
22.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
23.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
24.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
25.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
26.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0
27.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	4130.0	0.0	920.9	277.5	139.3	33.2	0.0	5509.9	0.0
28.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4070.0	0.0	960.6	289.5	145.3	34.7	0.0	5508.9	0.0
29.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4028.0	0.0	989.6	298.3	149.8	35.7	0.0	5510.2	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	7.1	0.0	3991.0	0.0	845.1	295.9	113.3	36.7	0.0	5289.1	0.0
2.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3873.0	0.0	782.8	307.7	96.6	38.8	0.0	5104.7	0.0
3.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3762.0	0.0	716.1	314.7	82.3	39.9	0.0	4919.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
7.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
8.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
10.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
11.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
13.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
14.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
16.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
17.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
19.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
20.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
22.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
23.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
25.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
26.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3776.0	0.0	717.5	313.0	82.4	39.7	0.0	4933.2	0.0
28.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3689.0	0.0	744.7	331.5	87.7	42.3	0.0	4899.7	0.0
29.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3681.0	0.0	757.3	334.7	89.7	42.7	0.0	4910.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	17.4	0.0	11509.0	0.0	2408.0	946.6	302.9	119.1	0.0	15303.0	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN INTERNAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.8	0.0
FINAL CORE	0.9	0.0
ANNUAL EQUILIBRIUM	0.3	0.0
30 YR CUMULATIVE	9.1	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	574.1
FINAL CORE	0.0	505.7
ANNUAL EQUILIBRIUM	0.0	235.9
30 YR CUMULATIVE	0.0	7602.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	608.7
FINAL CORE	0.0	535.3
ANNUAL EQUILIBRIUM	0.0	253.5
30 YR CUMULATIVE	0.0	8168.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	39.1	31.3
FINAL CORE	43.0	28.9
ANNUAL EQUILIBRIUM	13.9	9.1
30 YR CUMULATIVE	455.2	299.4

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	101150.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN INTERNAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	39.1	0.0	17975.0	0.0	0.0	0.0	0.0	0.0	0.0	18014.1	0.0
1.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
2.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
4.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
5.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
7.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
8.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
11.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
13.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
14.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
16.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
17.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
19.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
20.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
22.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
23.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
25.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
26.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	6388.0	0.0	0.0	0.0	0.0	0.0	0.0	6401.9	0.0
28.00	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6239.0	0.0	0.0	0.0	0.0	0.0	0.0	6252.6	0.0
29.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	7131.0	0.0	0.0	0.0	0.0	0.0	0.0	7146.5	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN INTERNAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	11.3	0.0	6082.0	0.0	111.5	3.4	0.0	0.0	0.0	6208.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	11.0	0.0	6839.0	0.0	222.5	12.9	0.0	0.0	0.0	7085.4	0.0
3.00	0.0	0.0	0.0	0.0	0.0	9.0	0.0	6046.0	0.0	240.1	18.3	0.0	0.0	0.0	6313.4	0.0
4.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
5.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
7.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
8.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
10.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
11.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
14.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
17.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
19.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
20.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
23.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
25.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
26.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	9.1	0.0	6053.0	0.0	235.9	17.6	0.0	0.0	0.0	6315.6	0.0
28.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5896.0	0.0	239.8	18.8	0.0	0.0	0.0	6163.2	0.0
29.00	0.0	0.0	0.0	0.0	0.0	9.9	0.0	6734.0	0.0	275.3	21.3	0.0	0.0	0.0	7040.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	28.9	0.0	17305.0	0.0	505.7	29.6	0.0	0.0	0.0	17869.2	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN AXIAL BLANKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.4	0.0
FINAL CORE	0.4	0.0
ANNUAL EQUILIBRIUM	0.1	0.0
30 YR CUMULATIVE	4.5	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	111.5
FINAL CORE	0.0	113.2
ANNUAL EQUILIBRIUM	0.0	54.7
30 YR CUMULATIVE	0.0	1646.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	114.6
FINAL CORE	0.0	116.0
ANNUAL EQUILIBRIUM	0.0	56.7
30 YR CUMULATIVE	0.0	1704.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	20.9	18.5
FINAL CORE	20.9	18.5
ANNUAL EQUILIBRIUM	7.0	5.8
30 YR CUMULATIVE	222.7	187.5

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	101150.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN AXIAL BLANKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	20.9	0.0	9588.0	0.0	0.0	0.0	0.0	0.0	0.0	9608.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3196.0	0.0	0.0	0.0	0.0	0.0	0.0	3203.0	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN AXIAL BLANKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	6.5	0.0	3175.0	0.0	19.1	0.2	0.0	0.0	0.0	3200.9	0.0
2.00	0.0	0.0	0.0	0.0	0.0	6.1	0.0	3153.0	0.0	37.7	0.9	0.0	0.0	0.0	3197.8	0.0
3.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3131.0	0.0	54.7	2.0	0.0	0.0	0.0	3193.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	9460.0	0.0	113.2	2.8	0.0	0.0	0.0	9594.5	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN RADIAL BLNKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.9	0.0
FINAL CORE	0.9	0.0
ANNUAL EQUILIBRIUM	0.2	0.0
30 YR CUMULATIVE	5.3	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	492.4
FINAL CORE	0.0	505.2
ANNUAL EQUILIBRIUM	0.0	136.1
30 YR CUMULATIVE	0.0	4087.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	523.3
FINAL CORE	0.0	537.1
ANNUAL EQUILIBRIUM	0.0	153.0
30 YR CUMULATIVE	0.0	4538.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	44.7	34.7
FINAL CORE	44.7	33.4
ANNUAL EQUILIBRIUM	7.8	4.9
30 YR CUMULATIVE	260.3	175.7

NUMBER OF BATCHES	6
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	101150.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN RADIAL BLNKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	44.7	0.0	20500.0	0.0	0.0	0.0	0.0	0.0	0.0	20544.7	0.0
1.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
2.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
3.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
4.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
5.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	2673.0	0.0	0.0	0.0	0.0	0.0	0.0	2678.8	0.0
6.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
7.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
8.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
9.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
10.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
11.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	2673.0	0.0	0.0	0.0	0.0	0.0	0.0	2678.8	0.0
12.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
13.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
14.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
15.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
16.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
17.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	2673.0	0.0	0.0	0.0	0.0	0.0	0.0	2678.8	0.0
18.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
19.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
20.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
21.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
22.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	2673.0	0.0	0.0	0.0	0.0	0.0	0.0	2678.8	0.0
24.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
25.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
26.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
27.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
28.00	0.0	0.0	0.0	0.0	0.0	7.8	0.0	3566.0	0.0	0.0	0.0	0.0	0.0	0.0	3573.8	0.0
29.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	2673.0	0.0	0.0	0.0	0.0	0.0	0.0	2678.8	0.0

LMFBR-2
PU(U)/U/U/U-HT 5.8 MM PIN RADIAL BLNKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3528.0	0.0	31.5	0.6	0.0	0.0	0.0	3567.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	6.3	0.0	3484.0	0.0	67.1	2.6	0.0	0.0	0.0	3560.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	6.0	0.0	3463.0	0.0	80.0	4.1	0.0	0.0	0.0	3553.1	0.0
4.00	0.0	0.0	0.0	0.0	0.0	5.3	0.0	3404.0	0.0	121.2	8.5	0.0	0.0	0.0	3539.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	4.8	0.0	2576.0	0.0	77.9	5.6	0.0	0.0	0.0	2664.3	0.0
6.00	0.0	0.0	0.0	0.0	0.0	5.3	0.0	3415.0	0.0	114.7	9.5	0.0	0.0	0.0	3544.4	0.0
7.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3379.0	0.0	147.1	16.8	0.0	0.0	0.0	3547.8	0.0
8.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3354.0	0.0	159.7	22.8	0.0	0.0	0.0	3541.2	0.0
9.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3381.0	0.0	136.1	16.9	0.0	0.0	0.0	3538.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	4.0	0.0	3347.0	0.0	158.2	24.6	0.0	0.0	0.0	3533.8	0.0
11.00	0.0	0.0	0.0	0.0	0.0	4.4	0.0	2556.0	0.0	88.8	8.2	0.0	0.0	0.0	2657.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	5.2	0.0	3411.0	0.0	110.0	10.3	0.0	0.0	0.0	3536.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3379.0	0.0	147.1	16.8	0.0	0.0	0.0	3547.8	0.0
14.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3354.0	0.0	159.7	22.8	0.0	0.0	0.0	3541.2	0.0
15.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3381.0	0.0	136.1	16.9	0.0	0.0	0.0	3538.9	0.0
16.00	0.0	0.0	0.0	0.0	0.0	4.0	0.0	3347.0	0.0	158.2	24.6	0.0	0.0	0.0	3533.8	0.0
17.00	0.0	0.0	0.0	0.0	0.0	4.4	0.0	2556.0	0.0	88.8	8.2	0.0	0.0	0.0	2657.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	5.2	0.0	3411.0	0.0	110.0	10.3	0.0	0.0	0.0	3536.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3379.0	0.0	147.1	16.8	0.0	0.0	0.0	3547.8	0.0
20.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3354.0	0.0	159.7	22.8	0.0	0.0	0.0	3541.2	0.0
21.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3381.0	0.0	136.1	16.9	0.0	0.0	0.0	3538.9	0.0
22.00	0.0	0.0	0.0	0.0	0.0	4.0	0.0	3347.0	0.0	158.2	24.6	0.0	0.0	0.0	3533.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	4.4	0.0	2556.0	0.0	88.8	8.2	0.0	0.0	0.0	2657.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	5.2	0.0	3411.0	0.0	110.0	10.3	0.0	0.0	0.0	3536.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3379.0	0.0	147.1	16.8	0.0	0.0	0.0	3547.8	0.0
26.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3354.0	0.0	159.7	22.8	0.0	0.0	0.0	3541.2	0.0
27.00	0.0	0.0	0.0	0.0	0.0	4.9	0.0	3381.0	0.0	136.1	16.9	0.0	0.0	0.0	3538.9	0.0
28.00	0.0	0.0	0.0	0.0	0.0	4.0	0.0	3347.0	0.0	158.2	24.6	0.0	0.0	0.0	3533.8	0.0
29.00	0.0	0.0	0.0	0.0	0.0	4.4	0.0	2556.0	0.0	88.8	8.2	0.0	0.0	0.0	2657.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	33.4	0.0	19834.0	0.0	505.2	31.9	0.0	0.0	0.0	20404.5	0.0

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	1.1	0.0
FINAL CORE	1.1	0.0
ANNUAL EQUILIBRIUM	0.4	0.0
30 YR CUMULATIVE	12.1	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	5028.9	4556.8
FINAL CORE	5096.9	4618.2
ANNUAL EQUILIBRIUM	1663.7	1448.0
30 YR CUMULATIVE	54355.0	47519.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	6503.7	6130.3
FINAL CORE	6591.9	6211.5
ANNUAL EQUILIBRIUM	2151.8	1982.6
30 YR CUMULATIVE	70297.6	64903.6
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	55.5	42.0
FINAL CORE	55.5	42.0
ANNUAL EQUILIBRIUM	18.6	12.0
30 YR CUMULATIVE	591.8	396.0
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		57700.0
THERMAL EFFICIENCY		0.365

LMFBR -3
HETEROGENEOUS PU,U/U/TH/TH CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8510.0	0.0	1456.0	439.0	220.3	52.6	0.0	10696.4	0.0
0.0	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8510.0	0.0	1456.0	439.0	220.3	52.6	0.0	10696.4	0.0
0.0	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8510.0	0.0	1456.0	439.0	220.3	52.6	0.0	10696.4	0.0
1.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8448.0	0.0	1499.0	451.9	226.8	54.1	0.0	10698.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8444.0	0.0	1501.0	452.7	227.2	54.2	0.0	10697.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
4.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
6.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
7.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
8.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
9.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
10.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
11.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
12.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
13.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
14.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
15.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
16.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
17.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
18.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
19.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
20.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
21.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
22.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
23.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
24.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
25.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
26.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0
27.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	8527.0	0.0	1445.0	435.9	218.7	52.2	0.0	10697.4	0.0
28.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	8485.0	0.0	1474.0	444.4	223.0	53.2	0.0	10698.1	0.0
29.00	0.0	0.0	0.0	0.0	0.0	18.4	0.0	8434.0	0.0	1508.0	454.8	228.2	54.5	0.0	10697.9	0.0

LMFBR -3
HETEROGENEOUS PU,U/U/TH/TH CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	16.0	0.0	8346.0	0.0	1399.0	453.7	187.7	55.8	0.0	10458.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	14.0	0.0	8194.0	0.0	1351.0	465.7	165.5	58.1	0.0	10248.3	0.0
3.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8022.0	0.0	1307.0	479.9	146.6	60.3	0.0	10027.8	0.0
4.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
6.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
7.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
9.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
10.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
12.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
15.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
18.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
19.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
21.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
24.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
25.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
27.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8051.0	0.0	1302.0	475.0	146.0	59.6	0.0	10045.6	0.0
28.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7972.0	0.0	1332.0	490.8	151.0	61.7	0.0	10019.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	12.0	0.0	7983.0	0.0	1338.0	490.4	152.4	61.6	0.0	10037.4	0.0
30.00	0.0	0.0	0.0	0.0	0.0	14.0	0.0	8164.0	0.0	1370.0	472.3	169.4	58.8	0.0	10248.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	14.0	0.0	8164.0	0.0	1370.0	472.3	169.4	58.8	0.0	10248.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	14.0	0.0	8164.0	0.0	1370.0	472.3	169.4	58.8	0.0	10248.5	0.0

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH INTERNAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	34.2	36.7
FINAL CORE	37.6	33.4
ANNUAL EQUILIBRIUM	11.9	11.8
30 YR CUMULATIVE	397.9	385.6
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	592.2
FINAL CORE	0.0	518.7
ANNUAL EQUILIBRIUM	0.0	242.5
30 YR CUMULATIVE	0.0	8051.3
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		57700.0
THERMAL EFFICIENCY		0.365

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH INTERNAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	9097.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9097.0	0.0
0.0	9097.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9097.0	0.0
0.0	9097.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9097.0	0.0
1.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
2.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
3.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
4.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
5.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
6.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
7.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
8.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
9.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
10.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
11.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
12.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
13.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
14.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
15.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
16.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
17.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
18.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
19.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
20.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
21.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
22.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
23.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
24.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
25.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
26.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0
27.00	9700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9700.0	0.0
28.00	9471.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9471.0	0.0
29.00	10824.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10824.0	0.0

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH INTERNAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	9352.0	18.6	0.0	91.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9462.8	0.0
2.00	10558.0	20.2	0.0	211.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10792.0	0.0
3.00	9390.0	16.9	0.0	233.6	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9644.4	0.0
4.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
5.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
6.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
7.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
8.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
9.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
10.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
11.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
12.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
13.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
14.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
15.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
16.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
17.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
18.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
19.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
20.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
21.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
22.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
23.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
24.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
25.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
26.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
27.00	9400.0	15.7	0.0	226.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9646.2	0.0
28.00	9155.0	17.5	0.0	239.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9415.8	0.0
29.00	10456.0	20.1	0.0	278.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10759.8	0.0
30.00	8893.0	16.2	0.0	156.7	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9067.9	0.0
30.00	8893.0	16.2	0.0	156.7	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9067.9	0.0
30.00	8893.0	16.2	0.0	156.7	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9067.9	0.0

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH AXIAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.8	0.2
FINAL CORE	0.8	0.2
ANNUAL EQUILIBRIUM	0.3	0.0
30 YR CUMULATIVE	8.8	0.4
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	129.6
FINAL CORE	0.0	130.8
ANNUAL EQUILIBRIUM	0.0	63.7
30 YR CUMULATIVE	0.0	1916.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	131.5
FINAL CORE	0.0	132.4
ANNUAL EQUILIBRIUM	0.0	64.9
30 YR CUMULATIVE	0.0	1951.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	40.6	37.9
FINAL CORE	40.6	37.8
ANNUAL EQUILIBRIUM	13.5	12.2
30 YR CUMULATIVE	432.6	392.9
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		57700.0
THERMAL EFFICIENCY		0.365

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH AXIAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
1.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
2.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	13.5	0.0	6208.0	0.0	0.0	0.0	0.0	0.0	0.0	6221.5	0.0

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH AXIAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	13.1	0.0	6184.0	0.0	22.3	0.1	0.0	0.0	0.0	6219.5	0.0
2.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	43.6	0.5	0.0	0.0	0.0	6217.7	0.0
3.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
4.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
6.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
7.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
8.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
9.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
10.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
11.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
12.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
13.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
14.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
15.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
16.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
17.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
18.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137,0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
19.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
20.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
21.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
22.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
23.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
24.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
25.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
26.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
27.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
28.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
29.00	0.0	0.0	0.0	0.0	0.0	12.2	0.0	6137.0	0.0	63.7	1.2	0.0	0.0	0.0	6214.1	0.0
30.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	43.6	0.5	0.0	0.0	0.0	6217.7	0.0
30.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	43.6	0.5	0.0	0.0	0.0	6217.7	0.0
30.00	0.0	0.0	0.0	0.0	0.0	12.6	0.0	6161.0	0.0	43.6	0.5	0.0	0.0	0.0	6217.7	0.0

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH RADIAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	40.7	38.4
FINAL CORE	39.0	38.3
ANNUAL EQUILIBRIUM	6.8	6.6
30 YR CUMULATIVE	228.9	221.2
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	465.0
FINAL CORE	0.0	477.3
ANNUAL EQUILIBRIUM	0.0	139.1
30 YR CUMULATIVE	0.0	4040.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
NUMBER OF BATCHES		6
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		57700.0
THERMAL EFFICIENCY		0.365

LMFBR -3
HETEROGENEOUS PU,U/U/TH/TH RADIAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
0.0	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
0.0	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
0.0	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
0.0	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
0.0	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
1.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
2.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
3.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
4.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
5.00	4059.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0,0	0.0	0.0	0.0	0.0	4059.0	0.0
6.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
7.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
8.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
9.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
10.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
11.00	4059.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4059.0	0.0
12.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
13.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
14.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
15.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
16.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
17.00	4059.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0,0	0.0	0.0	0.0	0.0	0.0	4059.0	0.0
18.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
19.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
20.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
21.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
22.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
23.00	4059.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4059.0	0.0
24.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
25.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
26.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
27.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
28.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
29.00	4059.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4059.0	0.0

LMFBR-3
HETEROGENEOUS PU,U/U/TH/TH RADIAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	5382.0	4.6	0.0	24.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5411.3	0.0
2.00	5340.0	5.5	0.0	61.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5407.6	0.0
3.00	5327.0	4.4	0.0	71.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5404.1	0.0
4.00	5267.0	5.6	0.0	121.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5396.0	0.0
5.00	3987.0	2.3	0.0	63.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4054.0	0.0
6.00	5302.0	3.2	0.0	96.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5402.7	0.0
7.00	5246.0	4.5	0.0	125.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.9	0.0
8.00	5207.0	5.3	0.0	160.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5376.2	0.0
9.00	5249.0	4.4	0.0	134.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5390.6	0.0
10.00	5196.0	5.5	0.0	173.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.7	0.0
11.00	3968.0	2.7	0.0	79.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4051.7	0.0
12.00	5295.0	3.4	0.0	100.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5400.8	0.0
13.00	5246.0	4.5	0.0	125.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.9	0.0
14.00	5207.0	5.3	0.0	160.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5376.2	0.0
15.00	5249.0	4.4	0.0	134.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5390.6	0.0
16.00	5196.0	5.5	0.0	173.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.7	0.0
17.00	3968.0	2.7	0.0	79.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4051.7	0.0
18.00	5295.0	3.4	0.0	100.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5400.8	0.0
19.00	5246.0	4.5	0.0	125.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.9	0.0
20.00	5207.0	5.3	0.0	160.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5376.2	0.0
21.00	5249.0	4.4	0.0	134.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5390.6	0.0
22.00	5196.0	5.5	0.0	173.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.7	0.0
23.00	3968.0	2.7	0.0	79.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4051.7	0.0
24.00	5295.0	3.4	0.0	100.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5400.8	0.0
25.00	5246.0	4.5	0.0	125.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.9	0.0
26.00	5207.0	5.3	0.0	160.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5376.2	0.0
27.00	5249.0	4.4	0.0	134.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5390.6	0.0
28.00	5196.0	5.5	0.0	173.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5378.7	0.0
29.00	3968.0	2.7	0.0	79.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4051.7	0.0
30.00	5096.0	4.4	0.0	75.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5176.5	0.0
30.00	5096.0	4.4	0.0	75.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5176.5	0.0
30.00	5096.0	4.4	0.0	75.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5176.5	0.0
30.00	5096.0	4.4	0.0	75.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5176.5	0.0
30.00	5096.0	4.4	0.0	75.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5176.5	0.0
30.00	5096.0	4.4	0.0	75.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5176.5	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.5	0.0
FINAL CORE	0.5	0.0
ANNUAL EQUILIBRIUM	0.2	0.0
30 YR CUMULATIVE	5.7	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	3463.1	2809.2
FINAL CORE	3517.1	2865.2
ANNUAL EQUILIBRIUM	1137.3	846.2
30 YR CUMULATIVE	37535.8	28301.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	4478.1	3906.2
FINAL CORE	4548.0	3981.9
ANNUAL EQUILIBRIUM	1470.7	1216.5
30 YR CUMULATIVE	48537.5	40501.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	26.2	17.3
FINAL CORE	26.1	17.4
ANNUAL EQUILIBRIUM	8.8	4.7
30 YR CUMULATIVE	278.1	154.5

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	103100.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	26.2	0.0	12023.0	0.0	3008.0	906.4	455.1	108.6	0.0	16527.3	0.0
1.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3954.0	0.0	1039.0	313.0	157.2	37.5	0.0	5509.3	0.0
2.00	0.0	0.0	0.0	0.0	0.0	8.5	0.0	3921.0	0.0	1062.0	319.9	160.6	38.3	0.0	5510.3	0.0
3.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
6.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
9.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
12.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
15.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
18.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
21.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
24.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0
27.00	0.0	0.0	0.0	0.0	0.0	8.8	0.0	4030.0	0.0	987.8	297.7	149.5	35.7	0.0	5509.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	8.7	0.0	3991.0	0.0	1014.0	305.7	153.5	36.6	0.0	5509.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3934.0	0.0	1053.0	317.2	159.3	38.0	0.0	5510.1	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3889.0	0.0	904.6	316.1	122.6	39.3	0.0	5278.6	0.0
2.00	0.0	0.0	0.0	0.0	0.0	5.7	0.0	3777.0	0.0	831.1	325.9	104.6	41.4	0.0	5085.7	0.0
3.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3671.0	0.0	756.9	331.6	89.4	42.7	0.0	4896.2	0.0
4.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
5.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
6.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
7.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
8.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
9.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
10.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
11.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
12.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
13.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
14.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
15.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
16.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
17.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
18.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
19.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
20.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
21.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
22.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
23.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
24.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
25.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
26.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
27.00	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3696.0	0.0	757.0	328.1	89.2	42.2	0.0	4917.2	0.0
28.00	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3623.0	0.0	777.5	342.6	93.1	44.2	0.0	4884.9	0.0
29.00	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3602.0	0.0	795.2	348.7	96.1	45.0	0.0	4891.6	0.0
30.00	0.0	0.0	0.0	0.0	0.0	17.4	0.0	11271.0	0.0	2541.0	990.9	324.2	125.8	0.0	15270.3	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN INTERNL BT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	21.2	22.3
FINAL CORE	23.3	20.4
ANNUAL EQUILIBRIUM	7.5	7.1
30 YR CUMULATIVE	246.2	233.4
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	577.6
FINAL CORE	0.0	505.2
ANNUAL EQUILIBRIUM	0.0	233.6
30 YR CUMULATIVE	0.0	7596.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	103100.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN INTERNL BT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	16882.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16882.0	0.0
1.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
2.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
3.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
4.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
5.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
6.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
7.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
8.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
9.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
10.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
11.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
12.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
13.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
14.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
15.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
16.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
17.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
18.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
19.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
20.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
21.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
22.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
23.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
24.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
25.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
26.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0
27.00	5999.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5999.0	0.0
28.00	5859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5859.0	0.0
29.00	6696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6696.0	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN INTERNL BT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	5733.0	19.7	0.0	93.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5847.5	0.0
2.00	6416.0	18.9	0.0	204.7	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6643.8	0.0
3.00	5673.0	17.6	0.0	222.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5919.7	0.0
4.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
5.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
6.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
7.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
8.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
9.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
10.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
11.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
12.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
13.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
14.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
15.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
16.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
17.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
18.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
19.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
20.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
21.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
22.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
23.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
24.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
25.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
26.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
27.00	5684.0	16.6	0.0	217.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5923.5	0.0
28.00	5533.0	17.8	0.0	222.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5779.2	0.0
29.00	6319.0	20.3	0.0	256.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6602.7	0.0
30.00	16243.0	50.7	0.0	454.5	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16757.9	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN AXIAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.4	0.0
FINAL CORE	0.4	0.0
ANNUAL EQUILIBRIUM	0.1	0.0
30 YR CUMULATIVE	4.7	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	110.8
FINAL CORE	0.0	112.5
ANNUAL EQUILIBRIUM	0.0	54.0
30 YR CUMULATIVE	0.0	1626.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	113.6
FINAL CORE	0.0	115.0
ANNUAL EQUILIBRIUM	0.0	55.7
30 YR CUMULATIVE	0.0	1676.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	21.0	18.6
FINAL CORE	21.0	18.6
ANNUAL EQUILIBRIUM	7.0	5.8
30 YR CUMULATIVE	223.7	189.0

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	103100.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN AXIAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	21.0	0.0	9605.0	0.0	0.0	0.0	0.0	0.0	0.0	9626.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	7.0	0.0	3202.0	0.0	0.0	0.0	0.0	0.0	0.0	3209.0	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN AXIAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	6.6	0.0	3181.0	0.0	19.4	0.2	0.0	0.0	0.0	3207.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	6.2	0.0	3159.0	0.0	37.5	0.8	0.0	0.0	0.0	3203.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3138.0	0.0	54.0	1.7	0.0	0.0	0.0	3199.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	18.6	0.0	9479.0	0.0	112.5	2.5	0.0	0.0	0.0	9612.6	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN RADIAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	24.1	23.4
FINAL CORE	24.1	23.4
ANNUAL EQUILIBRIUM	4.2	4.0
30 YR CUMULATIVE	140.6	134.2
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	487.6
FINAL CORE	0.0	499.8
ANNUAL EQUILIBRIUM	0.0	139.0
30 YR CUMULATIVE	0.0	3963.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0

NUMBER OF BATCHES	6
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	103100.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN RADIAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	19257.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19257.0	0.0
1.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
2.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
3.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
4.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
5.00	2512.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2512.0	0.0
6.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
7.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
8.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
9.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
10.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
11.00	2512.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2512.0	0.0
12.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
13.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
14.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
15.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
16.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
17.00	2512.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2512.0	0.0
18.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
19.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
20.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
21.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
22.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
23.00	2512.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2512.0	0.0
24.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
25.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
26.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
27.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
28.00	3349.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3349.0	0.0
29.00	2512.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2512.0	0.0

LMFBR-4
PU(U)/U/TH/TH-HT 5.8 MM PIN RADIAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	3315.0	5.0	0.0	26.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3346.8	0.0
2.00	3271.0	5.6	0.0	61.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3339.0	0.0
3.00	3253.0	4.7	0.0	74.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3333.3	0.0
4.00	3199.0	5.7	0.0	114.1	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3321.7	0.0
5.00	2419.0	2.5	0.0	73.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2497.1	0.0
6.00	3207.0	3.9	0.0	109.7	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3323.8	0.0
7.00	3173.0	4.9	0.0	124.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3306.7	0.0
8.00	3149.0	5.3	0.0	144.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3304.1	0.0
9.00	3175.0	4.5	0.0	134.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3318.2	0.0
10.00	3143.0	5.5	0.0	149.1	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3302.8	0.0
11.00	2400.0	2.3	0.0	81.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2486.5	0.0
12.00	3203.0	3.7	0.0	112.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3322.5	0.0
13.00	3173.0	4.9	0.0	124.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3306.7	0.0
14.00	3149.0	5.3	0.0	144.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3304.1	0.0
15.00	3175.0	4.5	0.0	134.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3318.2	0.0
16.00	3143.0	5.5	0.0	149.1	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3302.8	0.0
17.00	2400.0	2.3	0.0	81.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2486.5	0.0
18.00	3203.0	3.7	0.0	112.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3322.5	0.0
19.00	3173.0	4.9	0.0	124.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3306.7	0.0
20.00	3149.0	5.3	0.0	144.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3304.1	0.0
21.00	3175.0	4.5	0.0	134.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3318.2	0.0
22.00	3143.0	5.5	0.0	149.1	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3302.8	0.0
23.00	2400.0	2.3	0.0	81.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2486.5	0.0
24.00	3203.0	3.7	0.0	112.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3322.5	0.0
25.00	3173.0	4.9	0.0	124.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3306.7	0.0
26.00	3149.0	5.3	0.0	144.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3304.1	0.0
27.00	3175.0	4.5	0.0	134.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3318.2	0.0
28.00	3143.0	5.5	0.0	149.1	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3302.8	0.0
29.00	2400.0	2.3	0.0	81.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2486.5	0.0
30.00	18634.0	28.9	0.0	470.9	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19144.2	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	29.6	28.6
FINAL CORE	29.7	28.6
ANNUAL EQUILIBRIUM	9.5	9.0
30 YR CUMULATIVE	316.8	300.8
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	6005.7	4702.4
FINAL CORE	5989.5	4701.1
ANNUAL EQUILIBRIUM	1894.1	1303.6
30 YR CUMULATIVE	64024.0	45475.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	7689.1	6459.6
FINAL CORE	7667.7	6455.2
ANNUAL EQUILIBRIUM	2424.8	1865.4
30 YR CUMULATIVE	81963.5	64436.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	691.3
FINAL CORE	0.0	684.9
ANNUAL EQUILIBRIUM	0.0	314.9
30 YR CUMULATIVE	0.0	9804.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	58700.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	23650.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5216.0	1495.0	789.7	188.4	0.0	31339.1	0.0
1.00	8051.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.0	509.2	269.0	64.1	0.0	10670.3	0.0
2.00	8025.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1795.0	514.4	271.8	64.8	0.0	10671.0	0.0
3.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
4.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
5.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
6.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
7.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
8.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
9.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
10.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
11.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
12.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
13.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
14.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
15.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
16.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
17.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
18.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
19.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
20.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
21.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
22.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
23.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
24.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
25.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
26.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0
27.00	7578.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1645.0	471.3	249.1	59.4	0.0	10002.8	0.0
28.00	8077.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1759.0	504.0	266.3	63.5	0.0	10669.8	0.0
29.00	8022.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1798.0	515.1	272.1	64.9	0.0	10672.1	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	7900.0	22.0	0.0	111.0	0.6	0.0	0.0	0.0	0.0	1568.0	522.4	230.8	67.5	0.0	10422.3	0.0
2.00	7761.0	20.8	0.0	218.8	2.6	0.0	0.0	0.0	0.0	1393.0	529.9	203.3	69.9	0.0	10199.3	0.0
3.00	7138.0	19.7	0.0	299.0	5.9	0.0	0.0	0.0	0.0	1140.0	500.3	167.3	67.3	0.0	9337.4	0.0
4.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
5.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
6.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
7.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
8.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
9.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
10.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
11.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
12.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
13.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
14.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
15.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
16.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
17.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
18.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
19.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
20.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
21.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
22.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
23.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
24.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
25.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
26.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
27.00	7169.0	19.5	0.0	295.4	5.7	0.0	0.0	0.0	0.0	1137.0	495.3	166.6	66.5	0.0	9355.0	0.0
28.00	7620.0	20.6	0.0	310.9	5.9	0.0	0.0	0.0	0.0	1232.0	534.3	180.3	71.7	0.0	9975.7	0.0
29.00	7604.0	20.2	0.0	304.9	5.7	0.0	0.0	0.0	0.0	1254.0	539.0	182.9	72.3	0.0	9983.0	0.0
30.00	22824.0	61.6	0.0	623.3	8.9	0.0	0.0	0.0	0.0	4100.0	1550.0	601.1	204.1	0.0	29973.0	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN INNER BT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	34.2	36.8
FINAL CORE	37.6	33.5
ANNUAL EQUILIBRIUM	12.2	11.8
30 YR CUMULATIVE	398.0	386.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	571.3
FINAL CORE	0.0	480.7
ANNUAL EQUILIBRIUM	0.0	236.2
30 YR CUMULATIVE	0.0	7776.4
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	58700.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN INNER BT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	27292.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27292.0	0.0
1.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
2.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
3.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
4.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
5.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
6.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
7.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
8.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
9.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
10.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
11.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
12.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
13.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
14.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
15.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
16.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
17.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
18.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
19.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
20.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
21.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
22.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
23.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
24.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
25.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
26.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0
27.00	9699.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9699.0	0.0
28.00	9474.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9474.0	0.0
29.00	10826.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10826.0	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN INNER BT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	9359.0	18.5	0.0	88.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9466.1	0.0
2.00	10568.0	19.8	0.0	203.7	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10793.9	0.0
3.00	9404.0	16.3	0.0	224.9	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.7	0.0
4.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
5.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
6.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
7.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
8.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
9.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
10.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
11.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
12.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
13.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
14.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
15.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
16.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
17.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
18.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
19.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
20.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
21.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
22.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
23.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
24.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
25.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
26.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
27.00	9409.0	15.4	0.0	220.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9648.6	0.0
28.00	9170.0	16.8	0.0	230.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9421.4	0.0
29.00	10473.0	19.4	0.0	270.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10767.0	0.0
30.00	26731.0	45.4	0.0	435.3	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27216.8	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN AXIAL BT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	22.8	22.6
FINAL CORE	22.8	22.6
ANNUAL EQUILIBRIUM	7.3	7.2
30 YR CUMULATIVE	243.8	241.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	138.3
FINAL CORE	0.0	141.2
ANNUAL EQUILIBRIUM	0.0	65.6
30 YR CUMULATIVE	0.0	2064.2
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	58700.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN AXIAL BT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	18216.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18216.0	0.0
1.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
2.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
3.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
4.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
5.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
6.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
7.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
8.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
9.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
10.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
11.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
12.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
13.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
14.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
15.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
16.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
17.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
18.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
19.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
20.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
21.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
22.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
23.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
24.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
25.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
26.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
27.00	5814.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5814.0	0.0
28.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0
29.00	6201.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6201.0	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN AXIAL BT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	6176.0	3.9	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6200.6	0.0
2.00	6151.0	3.8	0.0	44.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6199.2	0.0
3.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
4.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
5.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
6.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
7.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
8.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
9.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
10.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
11.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
12.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
13.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
14.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
15.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
16.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
17.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
18.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
19.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
20.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
21.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
22.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
23.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
24.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
25.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
26.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
27.00	5743.0	3.5	0.0	62.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5809.0	0.0
28.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
29.00	6126.0	3.8	0.0	66.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6196.4	0.0
30.00	18067.0	11.1	0.0	130.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18208.7	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN RADIAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	35.6	36.6
FINAL CORE	37.3	35.0
ANNUAL EQUILIBRIUM	5.1	6.6
30 YR CUMULATIVE	218.8	212.8
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	473.9
FINAL CORE	0.0	466.1
ANNUAL EQUILIBRIUM	0.0	121.5
30 YR CUMULATIVE	0.0	3717.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0

NUMBER OF BATCHES	6
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	58700.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN RADIAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	28420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28420.0	0.0
1.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0
2.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
3.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
4.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
5.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0
6.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
7.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
8.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
9.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0
10.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
11.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
12.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
13.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0
14.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
15.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
16.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
17.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0
18.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
19.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
20.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
21.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0
22.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
23.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
24.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
25.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0
26.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
27.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
28.00	5413.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5413.0	0.0
29.00	4060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4060.0	0.0

LMFBR-5
PU(TH)/TH/TH/TH-HT 7.9 MM PIN RADIAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	4036.0	3.3	0.0	19.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4059.3	0.0
2.00	5339.0	5.1	0.0	59.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5403.7	0.0
3.00	5325.0	4.4	0.0	73.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5403.8	0.0
4.00	5268.0	4.8	0.0	107.9	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5382.4	0.0
5.00	3978.0	2.5	0.0	70.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4052.2	0.0
6.00	5256.0	4.4	0.0	118.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5380.5	0.0
7.00	5235.0	5.1	0.0	132.4	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5375.2	0.0
8.00	5214.0	4.9	0.0	134.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5356.4	0.0
9.00	3953.0	2.7	0.0	80.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4037.6	0.0
10.00	5215.0	5.0	0.0	134.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5356.8	0.0
11.00	5260.0	4.8	0.0	118.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5385.7	0.0
12.00	5250.0	4.4	0.0	115.9	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5372.5	0.0
13.00	3934.0	3.3	0.0	95.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4035.2	0.0
14.00	5215.0	5.1	0.0	135.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5357.8	0.0
15.00	5254.0	4.5	0.0	117.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5377.5	0.0
16.00	5214.0	4.8	0.0	133.9	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5355.3	0.0
17.00	3959.0	3.0	0.0	82.2	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4045.8	0.0
18.00	5251.0	4.6	0.0	116.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5374.0	0.0
19.00	5235.0	5.1	0.0	132.4	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5375.2	0.0
20.00	5214.0	4.9	0.0	134.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5356.4	0.0
21.00	3953.0	2.7	0.0	80.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4037.6	0.0
22.00	5215.0	5.0	0.0	134.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5356.8	0.0
23.00	5260.0	4.8	0.0	118.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5385.7	0.0
24.00	5250.0	4.4	0.0	115.9	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5372.5	0.0
25.00	3934.0	3.3	0.0	95.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4035.2	0.0
26.00	5215.0	5.1	0.0	135.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5357.8	0.0
27.00	5254.0	4.5	0.0	117.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5377.5	0.0
28.00	5214.0	4.8	0.0	133.9	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5355.3	0.0
29.00	3959.0	3.0	0.0	82.2	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4045.8	0.0
30.00	27920.0	25.2	0.0	440.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28392.3	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	818.6
FINAL CORE	0.0	821.3
ANNUAL EQUILIBRIUM	0.0	391.7
30 YR CUMULATIVE	0.0	11870.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	841.0
FINAL CORE	0.0	843.9
ANNUAL EQUILIBRIUM	0.0	405.6
30 YR CUMULATIVE	0.0	12283.6
URANIUM-233 (KG/GWE)		
INITIAL CORE	4605.0	3492.0
FINAL CORE	4678.0	3539.0
ANNUAL EQUILIBRIUM	1580.0	1044.0
30 YR CUMULATIVE	49792.0	33405.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	263.8	268.9
FINAL CORE	266.4	272.0
ANNUAL EQUILIBRIUM	90.2	92.7
30 YR CUMULATIVE	2837.3	2912.4

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	44900.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	4605.0	1297.0	263.8	43.4	36068.0	0.0	0.0	0.0	0.0	0.0	0.0	42277.2	0.0
1.00	0.0	0.0	0.0	1610.0	453.5	91.3	15.2	12163.0	0.0	0.0	0.0	0.0	0.0	0.0	14333.0	0.0
2.00	0.0	0.0	0.0	1475.0	415.4	84.6	13.9	11629.0	0.0	0.0	0.0	0.0	0.0	0.0	13617.9	0.0
3.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
4.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
5.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
6.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
7.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
8.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
9.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
10.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
11.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
12.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
13.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
14.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
15.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
16.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
17.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
18.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
19.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
20.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
21.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
22.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
23.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
24.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
25.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
26.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0
27.00	0.0	0.0	0.0	1580.0	445.1	90.2	14.9	12202.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.2	0.0
28.00	0.0	0.0	0.0	1627.0	458.3	91.8	15.3	12140.0	0.0	0.0	0.0	0.0	0.0	0.0	14332.4	0.0
29.00	0.0	0.0	0.0	1471.0	414.0	84.4	13.9	11635.0	0.0	0.0	0.0	0.0	0.0	0.0	13618.3	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	1358.0	438.7	90.4	15.9	12045.0	0.0	147.5	1.7	0.0	0.0	0.0	14097.2	0.0
2.00	0.0	0.0	0.0	1102.0	413.3	86.7	16.4	11250.0	0.0	279.1	6.8	0.0	0.0	0.0	13154.3	0.0
3.00	0.0	0.0	0.0	1032.0	430.7	91.8	18.4	11689.0	0.0	392.0	13.9	0.0	0.0	0.0	13667.8	0.0
4.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
5.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
6.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
7.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
8.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
9.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
10.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
11.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
12.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
13.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
14.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
15.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
16.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
17.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
18.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
19.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
20.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
21.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
22.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
23.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
24.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
25.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
26.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
27.00	0.0	0.0	0.0	1044.0	435.9	92.7	18.7	11664.0	0.0	391.7	13.9	0.0	0.0	0.0	13660.9	0.0
28.00	0.0	0.0	0.0	1058.0	443.8	94.1	19.0	11621.0	0.0	393.5	13.9	0.0	0.0	0.0	13643.3	0.0
29.00	0.0	0.0	0.0	944.5	405.8	87.0	17.7	11081.0	0.0	395.0	14.7	0.0	0.0	0.0	12945.7	0.0
30.00	0.0	0.0	0.0	3539.0	1302.0	272.0	51.6	34888.0	0.0	821.3	22.6	0.0	0.0	0.0	40896.5	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	23.1	23.0
FINAL CORE	23.2	23.0
ANNUAL EQUILIBRIUM	7.8	7.8
30 YR CUMULATIVE	246.8	244.4
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	30.0
FINAL CORE	0.0	30.2
ANNUAL EQUILIBRIUM	0.0	15.2
30 YR CUMULATIVE	0.0	449.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	30.3
FINAL CORE	0.0	30.5
ANNUAL EQUILIBRIUM	0.0	15.4
30 YR CUMULATIVE	0.0	455.1
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	122.0
FINAL CORE	0.0	122.6
ANNUAL EQUILIBRIUM	0.0	61.9
30 YR CUMULATIVE	0.0	1826.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	10.1	9.6
FINAL CORE	10.1	9.6
ANNUAL EQUILIBRIUM	3.4	3.2
30 YR CUMULATIVE	107.6	99.8

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	44900.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	18472.0	0.0	0.0	0.0	0.0	10.1	0.0	4620.0	0.0	0.0	0.0	0.0	0.0	0.0	23102.1	0.0
1.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
2.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
3.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
4.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
5.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
6.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
7.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
8.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
9.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
10.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
11.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
12.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
13.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
14.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
15.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
16.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
17.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
18.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
19.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
20.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
21.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
22.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
23.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
24.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
25.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
26.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0
27.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
28.00	6262.0	0.0	0.0	0.0	0.0	3.4	0.0	1566.0	0.0	0.0	0.0	0.0	0.0	0.0	7831.4	0.0
29.00	5949.0	0.0	0.0	0.0	0.0	3.3	0.0	1488.0	0.0	0.0	0.0	0.0	0.0	0.0	7440.3	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	6240.0	3.3	0.0	17.4	0.0	3.3	0.0	1561.0	0.0	5.1	0.0	0.0	0.0	0.0	7830.2	0.0
2.00	5907.0	3.1	0.0	36.2	0.1	3.1	0.0	1478.0	0.0	9.7	0.1	0.0	0.0	0.0	7437.3	0.0
3.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
4.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
5.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
6.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
7.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
8.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
9.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
10.00	6196.0	3.5	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
11.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
12.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
13.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
14.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
15.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
16.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
17.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
18.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
19.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
20.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
21.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
22.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
23.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
24.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
25.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
26.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
27.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
28.00	6196.0	3.4	0.0	58.5	0.3	3.2	0.0	1550.0	0.0	15.2	0.2	0.0	0.0	0.0	7826.8	0.0
29.00	5886.0	3.3	0.0	55.5	0.3	3.0	0.0	1473.0	0.0	14.5	0.2	0.0	0.0	0.0	7435.8	0.0
30.00	18343.0	10.1	0.0	112.5	0.4	9.6	0.0	4589.0	0.0	30.2	0.3	0.0	0.0	0.0	23095.0	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT INTERNAL BKT

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	19.3	18.9
FINAL CORE	19.3	18.9
ANNUAL EQUILIBRIUM	6.8	6.6
30 YR CUMULATIVE	204.9	199.4
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	71.7
FINAL CORE	0.0	72.9
ANNUAL EQUILIBRIUM	0.0	37.7
30 YR CUMULATIVE	0.0	1054.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	73.9
FINAL CORE	0.0	75.1
ANNUAL EQUILIBRIUM	0.0	39.2
30 YR CUMULATIVE	0.0	1094.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	295.9
FINAL CORE	0.0	300.8
ANNUAL EQUILIBRIUM	0.0	154.6
30 YR CUMULATIVE	0.0	4341.3
URANIUM-235 (KG/GWE)		
INITIAL CORE	3.0	7.3
FINAL CORE	8.4	7.2
ANNUAL EQUILIBRIUM	3.0	2.4
30 YR CUMULATIVE	89.0	73.1

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	44900.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT INTERNAL BKT
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	15440.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	16807.0	0.0
1.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
2.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
3.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
4.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
5.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
6.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
7.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
8.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
9.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
10.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
11.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
12.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
13.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
14.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
15.00	5449.0	0.0	0.0	0.0	0.0	8.4	0.0	3864.0	0.0	0.0	0.0	0.0	0.0	0.0	9321.4	0.0
16.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
17.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
18.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
19.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
20.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
21.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
22.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
23.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
24.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
25.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
26.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0
27.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
28.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
29.00	4541.0	0.0	0.0	0.0	0.0	2.5	0.0	1136.0	0.0	0.0	0.0	0.0	0.0	0.0	5679.5	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT INTERNAL BKT
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	5390.0	9.3	0.0	46.5	0.2	2.7	0.0	1349.0	0.0	13.4	0.2	0.0	0.0	0.0	6811.3	0.0
2.00	4444.0	7.6	0.0	78.5	0.8	2.1	0.0	1112.0	0.0	20.8	0.5	0.0	0.0	0.0	5666.4	0.0
3.00	5261.0	9.8	0.0	144.2	2.6	2.4	0.0	1317.0	0.0	37.5	1.5	0.0	0.0	0.0	6776.0	0.0
4.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
5.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
6.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
7.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
8.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
9.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
10.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
11.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
12.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
13.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
14.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
15.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
16.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
17.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
18.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
19.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
20.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
21.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
22.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
23.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
24.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
25.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
26.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
27.00	5261.0	9.6	0.0	145.0	2.6	2.4	0.0	1317.0	0.0	37.7	1.5	0.0	0.0	0.0	6776.8	0.0
28.00	5261.0	9.6	0.0	144.4	2.5	2.4	0.0	1317.0	0.0	37.3	1.5	0.0	0.0	0.0	6775.7	0.0
29.00	4390.0	7.4	0.0	117.2	2.0	2.0	0.0	1099.0	0.0	30.3	1.2	0.0	0.0	0.0	5649.0	0.0
30.00	15089.0	26.9	0.0	273.9	3.6	7.2	0.0	3776.0	0.0	72.9	2.2	0.0	0.0	0.0	19251.8	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	39.6	39.2
FINAL CORE	39.6	39.2
ANNUAL EQUILIBRIUM	6.8	6.7
30 YR CUMULATIVE	232.2	227.7
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	72.7
FINAL CORE	0.0	70.9
ANNUAL EQUILIBRIUM	0.0	20.4
30 YR CUMULATIVE	0.0	621.7
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	74.0
FINAL CORE	0.0	72.1
ANNUAL EQUILIBRIUM	0.0	20.9
30 YR CUMULATIVE	0.0	636.2
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	289.0
FINAL CORE	0.0	282.9
ANNUAL EQUILIBRIUM	0.0	84.7
30 YR CUMULATIVE	0.0	2561.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	17.2	16.0
FINAL CORE	17.2	16.0
ANNUAL EQUILIBRIUM	3.0	2.9
30 YR CUMULATIVE	100.9	87.1

NUMBER OF BATCHES	6
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.000
CAPACITY FACTOR	0.700
BURNUP (MWD/MT)	44900.0
THERMAL EFFICIENCY	0.365

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	31607.0	0.0	0.0	0.0	0.0	17.2	0.0	7910.0	0.0	0.0	0.0	0.0	0.0	0.0	39534.2	0.0
1.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
2.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
3.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
4.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
5.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
6.00	4360.0	0.0	0.0	0.0	0.0	2.4	0.0	1091.0	0.0	0.0	0.0	0.0	0.0	0.0	5453.4	0.0
7.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
8.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
9.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
10.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
11.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
12.00	4360.0	0.0	0.0	0.0	0.0	2.4	0.0	1091.0	0.0	0.0	0.0	0.0	0.0	0.0	5453.4	0.0
13.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
14.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
15.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
16.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
17.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
18.00	4360.0	0.0	0.0	0.0	0.0	2.4	0.0	1091.0	0.0	0.0	0.0	0.0	0.0	0.0	5453.4	0.0
19.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
20.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
21.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
22.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
23.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
24.00	4360.0	0.0	0.0	0.0	0.0	2.4	0.0	1091.0	0.0	0.0	0.0	0.0	0.0	0.0	5453.4	0.0
25.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
26.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
27.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
28.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0
29.00	5449.0	0.0	0.0	0.0	0.0	3.0	0.0	1364.0	0.0	0.0	0.0	0.0	0.0	0.0	6816.0	0.0

LMFBR-6
LEU3(U)/TH,U/TH,U/TH,U-HT RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	5432.0	2.8	0.0	14.8	0.0	2.9	0.0	1359.0	0.0	4.4	0.0	0.0	0.0	0.0	6815.9	0.0
2.00	5417.0	2.6	0.0	29.8	0.1	2.8	0.0	1355.0	0.0	8.1	0.1	0.0	0.0	0.0	6815.5	0.0
3.00	5402.0	2.3	0.0	41.0	0.2	2.8	0.0	1352.0	0.0	10.9	0.1	0.0	0.0	0.0	6811.3	0.0
4.00	5392.0	2.2	0.0	51.6	0.4	2.7	0.0	1348.0	0.0	13.6	0.2	0.0	0.0	0.0	6810.8	0.0
5.00	5372.0	2.6	0.0	68.3	0.6	2.7	0.0	1344.0	0.0	17.9	0.4	0.0	0.0	0.0	6808.5	0.0
6.00	4279.0	2.1	0.0	69.0	0.9	2.1	0.0	1070.0	0.0	17.8	0.5	0.0	0.0	0.0	5441.3	0.0
7.00	5296.0	3.6	0.0	89.8	1.4	2.3	0.0	1325.0	0.0	22.4	0.5	0.0	0.0	0.0	6741.0	0.0
8.00	5282.0	3.0	0.0	84.4	1.2	2.3	0.0	1322.0	0.0	21.0	0.5	0.0	0.0	0.0	6716.5	0.0
9.00	5321.0	2.6	0.0	82.1	1.0	2.5	0.0	1332.0	0.0	20.4	0.5	0.0	0.0	0.0	6762.1	0.0
10.00	5317.0	2.8	0.0	78.2	1.3	2.2	0.0	1329.0	0.0	19.4	0.5	0.0	0.0	0.0	6750.5	0.0
11.00	5345.0	3.3	0.0	89.4	1.2	2.9	0.0	1337.0	0.0	22.3	0.6	0.0	0.0	0.0	6801.7	0.0
12.00	4275.0	2.0	0.0	75.5	1.0	2.1	0.0	1069.0	0.0	18.7	0.5	0.0	0.0	0.0	5443.8	0.0
13.00	5296.0	3.6	0.0	89.8	1.4	2.3	0.0	1325.0	0.0	22.4	0.5	0.0	0.0	0.0	6741.0	0.0
14.00	5282.0	3.0	0.0	84.4	1.2	2.3	0.0	1322.0	0.0	21.0	0.5	0.0	0.0	0.0	6716.5	0.0
15.00	5321.0	2.6	0.0	82.1	1.0	2.5	0.0	1332.0	0.0	20.4	0.5	0.0	0.0	0.0	6762.1	0.0
16.00	5317.0	2.8	0.0	78.2	1.3	2.2	0.0	1329.0	0.0	19.4	0.5	0.0	0.0	0.0	6750.5	0.0
17.00	5345.0	3.3	0.0	89.4	1.2	2.9	0.0	1337.0	0.0	22.3	0.6	0.0	0.0	0.0	6801.7	0.0
18.00	4275.0	2.0	0.0	75.5	1.0	2.1	0.0	1069.0	0.0	18.7	0.5	0.0	0.0	0.0	5443.8	0.0
19.00	5296.0	3.6	0.0	89.8	1.4	2.3	0.0	1325.0	0.0	22.4	0.5	0.0	0.0	0.0	6741.0	0.0
20.00	5282.0	3.0	0.0	84.4	1.2	2.5	0.0	1322.0	0.0	21.0	0.5	0.0	0.0	0.0	6716.6	0.0
21.00	5321.0	2.6	0.0	82.1	1.0	2.2	0.0	1332.0	0.0	20.4	0.5	0.0	0.0	0.0	6761.8	0.0
22.00	5317.0	2.8	0.0	78.2	1.3	2.9	0.0	1329.0	0.0	19.4	0.5	0.0	0.0	0.0	6751.2	0.0
23.00	5345.0	3.3	0.0	89.4	1.2	2.1	0.0	1337.0	0.0	22.3	0.6	0.0	0.0	0.0	6800.8	0.0
24.00	4275.0	2.0	0.0	75.5	1.0	2.3	0.0	1069.0	0.0	18.7	0.5	0.0	0.0	0.0	5444.0	0.0
25.00	5296.0	3.6	0.0	89.8	1.4	2.5	0.0	1325.0	0.0	22.4	0.5	0.0	0.0	0.0	6741.1	0.0
26.00	5282.0	3.0	0.0	84.4	1.2	2.2	0.0	1322.0	0.0	21.0	0.5	0.0	0.0	0.0	6716.3	0.0
27.00	5321.0	2.6	0.0	82.1	1.0	2.9	0.0	1332.0	0.0	20.4	0.5	0.0	0.0	0.0	6762.5	0.0
28.00	5317.0	2.8	0.0	78.2	1.3	2.1	0.0	1329.0	0.0	19.4	0.5	0.0	0.0	0.0	6750.3	0.0
29.00	5345.0	3.3	0.0	89.4	1.2	2.3	0.0	1337.0	0.0	22.3	0.6	0.0	0.0	0.0	6801.1	0.0
30.00	31300.0	14.7	0.0	268.2	2.1	16.0	0.0	7830.0	0.0	70.9	1.3	0.0	0.0	0.0	39503.2	0.0

LMFBR-7
HOMOGENEOUS PU,U/U/U CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.2	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	3165.7	3018.5
FINAL CORE	3110.6	2986.5
ANNUAL EQUILIBRIUM	1244.2	1178.2
30 YR CUMULATIVE	39126.2	37014.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	4049.3	4031.3
FINAL CORE	3978.6	3983.8
ANNUAL EQUILIBRIUM	1591.4	1592.5
30 YR CUMULATIVE	50044.9	49940.2
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	44.1	28.2
FINAL CORE	44.4	28.2
ANNUAL EQUILIBRIUM	17.8	9.6
30 YR CUMULATIVE	554.0	308.6
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		61100.0
THERMAL EFFICIENCY		0.365

LMFBR-7
HOMOGENEOUS PU,U/U/U CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	44.1	0.0	22049.1	0.0	2751.5	785.6	414.2	98.0	0.0	26142.5	0.0
1.25	0.0	0.0	0.0	0.0	0.0	22.0	0.0	10965.1	0.0	1416.6	404.5	213.3	50.5	0.0	13072.0	0.0
2.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11053.0	0.0	1356.4	387.3	204.2	48.3	0.0	13071.3	0.0
3.75	0.0	0.0	0.0	0.0	0.0	22.0	0.0	10995.3	0.0	1395.9	398.5	210.2	49.7	0.0	13071.6	0.0
5.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11039.3	0.0	1365.8	390.0	205.6	48.6	0.0	13071.4	0.0
6.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11006.7	0.0	1388.2	396.3	209.0	49.4	0.0	13071.7	0.0
7.50	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
8.75	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
10.00	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
11.25	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
12.50	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
13.75	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
15.00	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
16.25	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
17.50	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
18.75	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
20.00	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
21.25	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
22.50	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
23.75	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
25.00	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
26.25	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
27.50	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0
28.75	0.0	0.0	0.0	0.0	0.0	22.2	0.0	11059.8	0.0	1351.8	385.9	203.5	48.1	0.0	13071.3	0.0

LMFBR-7
HOMOGENEOUS PU,U/U/U CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	0.0	0.0	0.0	0.0	0.0	16.2	1.3	10587.2	0.0	1374.1	432.1	158.4	55.2	0.0	12624.5	0.0
2.50	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10172.1	0.0	1357.0	466.7	129.0	58.8	0.0	12197.7	0.0
3.75	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10119.6	0.0	1381.7	478.9	133.2	60.4	0.0	12187.9	0.0
5.00	0.0	0.0	0.0	0.0	0.0	12.1	2.1	10201.6	0.0	1347.9	460.5	127.4	57.9	0.0	12209.5	0.0
6.25	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10147.2	0.0	1370.4	472.6	131.2	59.6	0.0	12195.1	0.0
7.50	0.0	0.0	0.0	0.0	0.0	12.1	2.1	10188.3	0.0	1353.3	463.4	128.3	58.3	0.0	12205.8	0.0
8.75	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
10.00	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
11.25	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
12.50	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
13.75	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
15.00	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
16.25	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
17.50	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
18.75	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
20.00	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
21.25	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
22.50	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
23.75	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
25.00	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
26.25	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
27.50	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
28.75	0.0	0.0	0.0	0.0	0.0	12.0	2.1	10193.5	0.0	1346.2	460.1	126.5	57.8	0.0	12198.2	0.0
30.00	0.0	0.0	0.0	0.0	0.0	28.2	3.5	20810.0	0.0	2704.5	885.2	282.0	112.1	0.0	24825.5	1316.8

LMFBR-7
HOMOGENEOUS PU,U/U/U AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	212.5
FINAL CORE	0.0	214.7
ANNUAL EQUILIBRIUM	0.0	112.2
30 YR CUMULATIVE	0.0	3365.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	218.0
FINAL CORE	0.0	220.2
ANNUAL EQUILIBRIUM	0.0	115.8
30 YR CUMULATIVE	0.0	3468.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	31.6	27.5
FINAL CORE	31.6	27.4
ANNUAL EQUILIBRIUM	12.6	10.6
30 YR CUMULATIVE	395.0	331.7
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		61100.0
THERMAL EFFICIENCY		0.365

LMFBR-7
HOMOGENEOUS PU,U/U/U AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	31.6	0.0	15966.0	0.0	0.0	0.0	0.0	0.0	0.0	15997.6	0.0
1.25	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
2.50	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
3.75	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
5.00	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
6.25	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
7.50	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
8.75	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
10.00	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
11.25	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
12.50	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
13.75	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
15.00	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
16.25	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
17.50	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
18.75	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
20.00	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
21.25	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
22.50	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
23.75	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
25.00	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
26.25	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
27.50	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0
28.75	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7983.0	0.0	0.0	0.0	0.0	0.0	0.0	7998.8	0.0

LMFBR-7
HOMOGENEOUS PU,U/U/U AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	0.0	0.0	0.0	0.0	0.0	14.4	0.4	7900.7	0.0	73.7	1.2	0.0	0.0	0.0	7990.4	0.0
2.50	0.0	0.0	0.0	0.0	0.0	13.1	0.7	7820.3	0.0	138.7	4.3	0.1	0.0	0.0	7977.2	0.0
3.75	0.0	0.0	0.0	0.0	0.0	13.1	0.7	7821.0	0.0	138.1	4.3	0.1	0.0	0.0	7977.3	0.0
5.00	0.0	0.0	0.0	0.0	0.0	13.1	0.7	7820.9	0.0	138.2	4.3	0.1	0.0	0.0	7977.3	0.0
6.25	0.0	0.0	0.0	0.0	0.0	13.1	0.7	7820.8	0.0	138.2	4.3	0.1	0.0	0.0	7977.2	0.0
7.50	0.0	0.0	0.0	0.0	0.0	13.1	0.7	7820.8	0.0	138.2	4.3	0.1	0.0	0.0	7977.2	0.0
8.75	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
10.00	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
11.25	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
12.50	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
13.75	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
15.00	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
16.25	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
17.50	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
18.75	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
20.00	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
21.25	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
22.50	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
23.75	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
25.00	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
26.25	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
27.50	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
28.75	0.0	0.0	0.0	0.0	0.0	13.2	0.7	7818.1	0.0	140.2	4.4	0.1	0.0	0.0	7976.7	0.0
30.00	0.0	0.0	0.0	0.0	0.0	27.4	1.0	15718.2	0.0	214.6	5.5	0.1	0.0	0.0	15966.8	31.6

LMFBR-7
HOMOGENEOUS PU,U/U/U RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	690.3
FINAL CORE	0.0	592.4
ANNUAL EQUILIBRIUM	0.0	199.9
30 YR CUMULATIVE	0.0	6023.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	711.1
FINAL CORE	0.0	607.9
ANNUAL EQUILIBRIUM	0.0	206.7
30 YR CUMULATIVE	0.0	6222.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	86.0	77.6
FINAL CORE	88.4	76.9
ANNUAL EQUILIBRIUM	17.7	14.5
30 YR CUMULATIVE	594.3	498.8
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		61100.0
THERMAL EFFICIENCY		0.365

LMFBR -7
HOMOGENEOUS PU,U/U/U RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	86.0	0.0	43463.0	0.0	0.0	0.0	0.0	0.0	0.0	43549.0	0.0
1.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11173.0	0.0	0.0	0.0	0.0	0.0	0.0	11195.1	0.0
2.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11173.0	0.0	0.0	0.0	0.0	0.0	0.0	11195.1	0.0
3.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11173.0	0.0	0.0	0.0	0.0	0.0	0.0	11195.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11173.0	0.0	0.0	0.0	0.0	0.0	0.0	11195.1	0.0
6.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11173.0	0.0	0.0	0.0	0.0	0.0	0.0	11195.1	0.0
7.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
8.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
11.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
12.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
13.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
15.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
16.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
17.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
18.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
20.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
21.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
22.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
23.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
25.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
26.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
27.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0
28.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11172.8	0.0	0.0	0.0	0.0	0.0	0.0	11194.9	0.0

LMFBR-7
HOMOGENEOUS PU,U/U/U RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	0.0	0.0	0.0	0.0	0.0	20.8	0.3	11082.4	0.0	80.8	1.0	0.0	0.0	0.0	11185.3	0.0
2.50	0.0	0.0	0.0	0.0	0.0	19.7	0.6	10993.8	0.0	152.4	3.6	0.1	0.0	0.0	11170.2	0.0
3.75	0.0	0.0	0.0	0.0	0.0	18.7	0.8	10906.7	0.0	216.8	7.6	0.2	0.0	0.0	11150.8	0.0
5.00	0.0	0.0	0.0	0.0	0.0	18.4	0.9	10879.0	0.0	239.8	8.6	0.2	0.0	0.0	11146.9	0.0
6.25	0.0	0.0	0.0	0.0	0.0	18.3	0.9	10871.8	0.0	246.2	8.7	0.2	0.0	0.0	11146.1	0.0
7.50	0.0	0.0	0.0	0.0	0.0	18.3	0.9	10871.7	0.0	246.2	8.7	0.2	0.0	0.0	11146.0	0.0
8.75	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
11.25	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
12.50	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
13.75	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
16.25	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
17.50	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
18.75	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
21.25	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
22.50	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
23.75	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
26.25	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
27.50	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
28.75	0.0	0.0	0.0	0.0	0.0	18.1	0.9	10866.6	0.0	249.7	8.5	0.2	0.0	0.0	11144.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	76.9	2.2	42765.8	0.0	592.0	15.5	0.4	0.0	0.0	43452.8	98.2

LMFBR-8
HOMOGENEOUS PU,U/TH/TH CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	3233.9	3064.7
FINAL CORE	3128.6	3002.3
ANNUAL EQUILIBRIUM	1251.4	1183.9
30 YR CUMULATIVE	39415.2	37233.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	4136.5	4098.6
FINAL CORE	4001.8	4005.4
ANNUAL EQUILIBRIUM	1600.7	1600.7
30 YR CUMULATIVE	50416.2	50255.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	44.0	28.0
FINAL CORE	44.2	28.0
ANNUAL EQUILIBRIUM	17.7	9.4
30 YR CUMULATIVE	552.0	304.2
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		59500.0
THERMAL EFFICIENCY		0.365

LMFBR-8
HOMOGENEOUS PU,U/TH/TH CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	44.0	0.0	21963.5	0.0	2810.7	802.5	423.2	100.1	0.0	26144.0	0.0
1.25	0.0	0.0	0.0	0.0	0.0	22.0	0.0	10960.5	0.0	1419.8	405.4	213.8	50.6	0.0	13072.1	0.0
2.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11026.0	0.0	1375.0	392.6	207.0	49.0	0.0	13071.7	0.0
3.75	0.0	0.0	0.0	0.0	0.0	22.0	0.0	10986.4	0.0	1402.1	400.3	211.1	49.9	0.0	13071.8	0.0
5.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11018.1	0.0	1380.4	394.1	207.8	49.2	0.0	13071.7	0.0
6.25	0.0	0.0	0.0	0.0	0.0	22.0	0.0	10994.2	0.0	1396.7	398.8	210.3	49.7	0.0	13071.7	0.0
7.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
8.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
10.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
11.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
12.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
13.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
15.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
16.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
17.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
18.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
20.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
21.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
22.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
23.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
25.00	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
26.25	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
27.50	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0
28.75	0.0	0.0	0.0	0.0	0.0	22.1	0.0	11048.4	0.0	1359.6	388.2	204.7	48.4	0.0	13071.4	0.0

LMFBR-8
HOMOGENEOUS PU,U/TH/TH CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	0.0	0.0	0.0	0.0	0.0	16.1	1.3	10537.6	0.0	1397.3	441.3	161.6	56.4	0.0	12611.6	0.0
2.50	0.0	0.0	0.0	0.0	0.0	11.9	2.1	10117.2	0.0	1374.2	476.2	131.6	60.0	0.0	12173.2	0.0
3.75	0.0	0.0	0.0	0.0	0.0	11.9	2.1	10100.0	0.0	1385.7	480.3	133.4	60.5	0.0	12173.9	0.0
5.00	0.0	0.0	0.0	0.0	0.0	11.9	2.1	10160.9	0.0	1359.9	466.6	129.0	58.6	0.0	12189.0	0.0
6.25	0.0	0.0	0.0	0.0	0.0	11.9	2.1	10123.4	0.0	1376.0	474.9	131.7	59.8	0.0	12179.8	0.0
7.50	0.0	0.0	0.0	0.0	0.0	11.9	2.1	10153.1	0.0	1363.3	468.3	129.6	58.9	0.0	12187.2	0.0
8.75	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
10.00	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
11.25	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
12.50	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
13.75	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
15.00	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
16.25	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
17.50	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
18.75	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
20.00	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
21.25	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
22.50	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
23.75	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
25.00	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
26.25	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
27.50	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
28.75	0.0	0.0	0.0	0.0	0.0	11.8	2.2	10167.8	0.0	1352.7	462.9	127.2	58.1	0.0	12182.7	0.0
30.00	0.0	0.0	0.0	0.0	0.0	28.0	3.5	20766.2	0.0	2718.8	890.5	283.5	112.6	0.0	24803.1	1339.1

LMFBR-8
HOMOGENEOUS PU,U/TH/TH AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	18.2	17.9
FINAL CORE	18.2	17.9
ANNUAL EQUILIBRIUM	7.3	7.1
30 YR CUMULATIVE	228.0	223.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	219.6
FINAL CORE	0.0	221.9
ANNUAL EQUILIBRIUM	0.0	115.4
30 YR CUMULATIVE	0.0	3463.6
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.1
FINAL CORE	0.0	0.1
ANNUAL EQUILIBRIUM	0.0	0.1
30 YR CUMULATIVE	0.0	2.3
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		59500.0
THERMAL EFFICIENCY		0.365

LMFBR-8
HOMOGENEOUS PU,U/TH/TH AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	14554.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14554.0	0.0
1.25	7277.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.1	0.0
2.50	7277.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.1	0.0
3.75	7277.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.1	0.0
5.00	7277.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.1	0.0
6.25	7277.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.1	0.0
7.50	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
8.75	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
10.00	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
11.25	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
12.50	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
13.75	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
15.00	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
16.25	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
17.50	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
18.75	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
20.00	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
21.25	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
22.50	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
23.75	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
25.00	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
26.25	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
27.50	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0
28.75	7277.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7277.0	0.0

LMFBR -8
HOMOGENEOUS PU,U/TH/TH AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	7194.3	7.1	0.0	69.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7272.1	0.0
2.50	7113.6	6.9	0.0	135.7	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.8	0.0
3.75	7114.2	6.9	0.0	135.2	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.9	0.0
5.00	7114.2	7.0	0.0	135.3	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7259.1	0.0
6.25	7114.2	7.0	0.0	135.3	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7259.1	0.0
7.50	7114.2	7.0	0.0	135.3	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7259.1	0.0
8.75	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
10.00	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
11.25	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
12.50	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
13.75	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
15.00	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
16.25	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
17.50	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
18.75	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
20.00	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
21.25	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
22.50	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
23.75	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
25.00	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
26.25	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
27.50	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
28.75	7111.6	7.1	0.0	137.2	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7258.6	0.0
30.00	14305.3	14.3	0.0	207.6	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14530.8	24.6

LMFBR-8
HOMOGENEOUS PU,U/TH/TH RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	49.7	50.1
FINAL CORE	51.1	48.9
ANNUAL EQUILIBRIUM	10.2	9.9
30 YR CUMULATIVE	343.2	335.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	642.2
FINAL CORE	0.0	555.4
ANNUAL EQUILIBRIUM	0.0	185.8
30 YR CUMULATIVE	0.0	5603.2
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.2
FINAL CORE	0.0	0.2
ANNUAL EQUILIBRIUM	0.0	0.1
30 YR CUMULATIVE	0.0	2.3
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		59500.0
THERMAL EFFICIENCY		0.365

LMFBR-8
HOMOGENEOUS PU,U/TH/TH RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	39620.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39620.0	0.0
1.25	10185.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10185.2	0.0
2.50	10185.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10185.2	0.0
3.75	10185.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10185.2	0.0
5.00	10185.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10185.2	0.0
6.25	10185.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10185.2	0.0
7.50	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
8.75	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
10.00	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
11.25	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
12.50	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
13.75	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
15.00	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
16.25	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
17.50	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
18.75	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
20.00	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
21.25	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
22.50	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
23.75	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
25.00	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
26.25	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
27.50	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0
28.75	10184.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10184.8	0.0

LMFBR -8
HOMOGENEOUS PU,U/TH/TH RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	10104.5	6.9	0.0	69.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10181.0	0.0
2.50	10025.6	6.8	0.0	135.5	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10169.8	0.0
3.75	9947.8	6.7	0.0	194.5	3.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10152.8	0.0
5.00	9922.1	6.7	0.0	216.1	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10149.1	0.0
6.25	9914.9	6.7	0.0	222.4	4.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10148.3	0.0
7.50	9914.9	6.7	0.0	222.4	4.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10148.3	0.0
8.75	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
10.00	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
11.25	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
12.50	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
13.75	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
15.00	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
16.25	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
17.50	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
18.75	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
20.00	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
21.25	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
22.50	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
23.75	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
25.00	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
26.25	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
27.50	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
28.75	9910.3	6.8	0.0	225.4	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10146.9	0.0
30.00	38990.1	23.6	0.0	531.8	7.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39553.5	67.4

LMFBR-9
HOMOGENEOUS PUTH/TH/TH CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	28.0	26.5
FINAL CORE	28.2	26.7
ANNUAL EQUILIBRIUM	11.3	10.5
30 YR CUMULATIVE	352.2	328.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	4055.5	2248.7
FINAL CORE	3904.2	2750.8
ANNUAL EQUILIBRIUM	1561.7	973.7
30 YR CUMULATIVE	49136.3	30682.5
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	5187.3	3465.6
FINAL CORE	4993.8	3921.7
ANNUAL EQUILIBRIUM	1997.5	1447.0
30 YR CUMULATIVE	62849.5	45538.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	902.8
FINAL CORE	0.0	913.4
ANNUAL EQUILIBRIUM	0.0	456.2
30 YR CUMULATIVE	0.0	13759.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	1.3
FINAL CORE	0.0	1.3
ANNUAL EQUILIBRIUM	0.0	0.9
30 YR CUMULATIVE	0.0	25.7
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		60000.0
THERMAL EFFICIENCY		0.365

LMFBR -9
HOMOGENEOUS PUTH/TH/TH CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	22331.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3524.8	1006.3	530.7	125.5	0.0	27518.7	0.0
1.25	11210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1731.3	494.3	260.7	61.7	0.0	13758.0	0.0
2.50	11214.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1728.5	493.5	260.2	61.6	0.0	13757.8	0.0
3.75	11215.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1727.6	493.2	260.1	61.5	0.0	13757.6	0.0
5.00	11217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1726.3	492.9	259.9	61.5	0.0	13757.6	0.0
6.25	11214.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1728.2	493.4	260.2	61.5	0.0	13757.8	0.0
7.50	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
8.75	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
10.00	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
11.25	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
12.50	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
13.75	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
15.00	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
16.25	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
17.50	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
18.75	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
20.00	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
21.25	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
22.50	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
23.75	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
25.00	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
26.25	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
27.50	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0
28.75	11259.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1696.7	484.4	255.4	60.4	0.0	13756.3	0.0

LMFBR-9
HOMOGENEOUS PUTH/TH/TH CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	10755.7	34.0	0.0	306.2	7.7	0.2	0.0	0.0	0.0	776.6	532.6	206.9	69.4	0.0	12589.3	0.0
2.50	10367.7	32.2	0.0	530.4	22.3	1.1	0.0	0.0	0.0	1097.0	541.7	168.2	73.2	0.0	12833.8	0.0
3.75	10413.7	32.3	0.0	530.3	22.2	1.1	0.0	0.0	0.0	1085.5	531.8	165.9	71.7	0.0	12854.5	0.0
5.00	10418.5	32.3	0.0	530.0	22.2	1.1	0.0	0.0	0.0	1081.5	531.2	165.4	71.7	0.0	12853.9	0.0
6.25	10419.0	32.4	0.0	530.4	22.2	1.1	0.0	0.0	0.0	1082.7	530.8	165.5	71.6	0.0	12855.7	0.0
7.50	10421.0	32.4	0.0	530.2	22.2	1.1	0.0	0.0	0.0	1080.6	530.5	165.3	71.6	0.0	12854.9	0.0
8.75	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
10.00	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
11.25	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
12.50	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
13.75	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
15.00	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
16.25	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
17.50	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
18.75	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
20.00	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
21.25	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
22.50	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
23.75	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
25.00	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
26.25	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
27.50	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
28.75	10449.8	32.9	0.0	537.3	22.8	1.1	0.0	0.0	0.0	1055.3	521.2	161.8	70.4	0.0	12852.6	0.0
30.00	21295.4	67.3	0.0	846.1	30.6	1.3	0.0	0.0	0.0	2389.7	1033.7	361.1	137.2	0.0	26162.4	1350.2

LMFBR-9
HOMOGENEOUS PUTH/TH/TH AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	20.8	20.5
FINAL CORE	20.8	20.5
ANNUAL EQUILIBRIUM	8.3	8.2
30 YR CUMULATIVE	259.9	255.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	217.8
FINAL CORE	0.0	218.5
ANNUAL EQUILIBRIUM	0.0	114.1
30 YR CUMULATIVE	0.0	3423.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		60000.0
THERMAL EFFICIENCY		0.365

LMFBR-9
HOMOGENEOUS PUTH/TH/TH AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	16593.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16593.5	0.0
1.25	8296.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.7	0.0
2.50	8296.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.7	0.0
3.75	8296.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.7	0.0
5.00	8296.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.7	0.0
6.25	8296.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.7	0.0
7.50	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
8.75	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
10.00	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
11.25	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
12.50	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
13.75	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
15.00	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
16.25	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
17.50	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
18.75	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
20.00	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
21.25	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
22.50	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
23.75	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
25.00	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
26.25	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
27.50	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0
28.75	8296.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8296.8	0.0

LMFBR-9
HOMOGENEOUS PUTH/TH/TH AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	8215.9	7.0	0.0	69.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8292.6	0.0
2.50	8137.2	6.8	0.0	135.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8281.1	0.0
3.75	8138.5	6.8	0.0	134.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8281.4	0.0
5.00	8138.5	6.8	0.0	134.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8281.4	0.0
6.25	8138.5	6.8	0.0	134.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8281.4	0.0
7.50	8138.5	6.8	0.0	134.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8281.4	0.0
8.75	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
10.00	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
11.25	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
12.50	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
13.75	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
15.00	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
16.25	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
17.50	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
18.75	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
20.00	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
21.25	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
22.50	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
23.75	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
25.00	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
26.25	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
27.50	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
28.75	8136.2	6.9	0.0	135.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8280.9	0.0
30.00	16352.3	13.8	0.0	204.7	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16573.7	21.0

LMFBR-9
HOMOGENEOUS PUTH/TH/TH RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	55.2	55.9
FINAL CORE	56.8	54.5
ANNUAL EQUILIBRIUM	11.4	11.1
30 YR CUMULATIVE	381.8	374.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	623.2
FINAL CORE	0.0	531.8
ANNUAL EQUILIBRIUM	0.0	179.6
30 YR CUMULATIVE	0.0	5415.2
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.25
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		60000.0
THERMAL EFFICIENCY		0.365

LMFBR-9
HOMOGENEOUS PUTH/TH/TH RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	44071.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44071.0	0.0
1.25	11329.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.2	0.0
2.50	11329.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.2	0.0
3.75	11329.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.2	0.0
5.00	11329.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.2	0.0
6.25	11329.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.2	0.0
7.50	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
8.75	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
10.00	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
11.25	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
12.50	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
13.75	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
15.00	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
16.25	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
17.50	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
18.75	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
20.00	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
21.25	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
22.50	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
23.75	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
25.00	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
26.25	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
27.50	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0
28.75	11329.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11329.1	0.0

LMFBR-9
HOMOGENEOUS PUTH/TH/TH RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.25	11251.8	6.7	0.0	66.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11325.5	0.0
2.50	11176.5	6.5	0.0	131.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11316.3	0.0
3.75	11102.1	6.4	0.0	189.5	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11301.1	0.0
5.00	11078.5	6.4	0.0	209.8	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11298.2	0.0
6.25	11072.4	6.4	0.0	215.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11297.8	0.0
7.50	11072.4	6.4	0.0	215.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11297.7	0.0
8.75	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
10.00	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
11.25	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
12.50	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
13.75	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
15.00	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
16.25	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
17.50	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
18.75	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
20.00	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
21.25	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
22.50	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
23.75	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
25.00	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
26.25	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
27.50	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
28.75	11068.7	6.5	0.0	218.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11296.8	0.0
30.00	43477.3	22.5	0.0	509.3	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44015.5	57.4

LMFBR-10
HOMOGENEOUS U3U8/TH/TH CORE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	34.1	36.3
FINAL CORE	34.3	36.6
ANNUAL EQUILIBRIUM	11.4	12.3
30 YR CUMULATIVE	361.8	389.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.7
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1092.4
FINAL CORE	0.0	1109.1
ANNUAL EQUILIBRIUM	0.0	467.3
30 YR CUMULATIVE	0.0	14080.7
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1152.8
FINAL CORE	0.0	1171.7
ANNUAL EQUILIBRIUM	0.0	499.7
30 YR CUMULATIVE	0.0	15022.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	3368.8	2147.5
FINAL CORE	3388.0	2141.7
ANNUAL EQUILIBRIUM	1129.3	605.6
30 YR CUMULATIVE	35749.8	19846.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	196.1	201.8
FINAL CORE	196.8	202.6
ANNUAL EQUILIBRIUM	65.6	67.7
30 YR CUMULATIVE	2073.0	2140.2
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.50
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		57500.0
THERMAL EFFICIENCY		0.365

LMFBR-10
HOMOGENEOUS U3U8/TH/TH CORE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	3368.8	945.2	196.1	31.4	30779.0	0.0	0.0	0.0	0.0	0.0	0.0	35320.5	0.0
1.50	0.0	0.0	0.0	1782.8	500.2	101.7	16.6	15256.2	0.0	0.0	0.0	0.0	0.0	0.0	17657.5	0.0
3.00	0.0	0.0	0.0	1688.5	473.8	98.2	15.7	15384.0	0.0	0.0	0.0	0.0	0.0	0.0	17660.2	0.0
4.50	0.0	0.0	0.0	1750.2	491.1	100.5	16.3	15300.4	0.0	0.0	0.0	0.0	0.0	0.0	17658.5	0.0
6.00	0.0	0.0	0.0	1706.3	478.8	98.9	15.9	15359.8	0.0	0.0	0.0	0.0	0.0	0.0	17659.7	0.0
7.50	0.0	0.0	0.0	1737.2	487.4	100.0	16.2	15317.9	0.0	0.0	0.0	0.0	0.0	0.0	17658.7	0.0
9.00	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
10.50	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
12.00	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
13.50	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
15.00	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
16.50	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
18.00	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
19.50	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
21.00	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
22.50	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
24.00	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
25.50	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
27.00	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0
28.50	0.0	0.0	0.0	1694.0	475.3	98.4	15.8	15376.5	0.0	0.0	0.0	0.0	0.0	0.0	17660.0	0.0

LMFBR-10
HOMOGENEOUS U3U8/TH/TH CORE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.50	0.0	0.0	0.0	1234.4	468.4	100.3	20.6	14863.4	0.0	400.2	13.5	0.3	0.0	0.0	17101.1	0.0
3.00	0.0	0.0	0.0	913.1	453.8	101.5	25.3	14354.1	0.0	690.0	46.8	1.9	0.1	0.0	16586.6	0.0
4.50	0.0	0.0	0.0	965.3	480.2	106.2	26.6	14225.6	0.0	686.1	46.8	1.9	0.1	0.0	16538.8	0.0
6.00	0.0	0.0	0.0	912.9	454.7	101.7	25.4	14344.2	0.0	692.1	47.2	2.0	0.1	0.0	16580.3	0.0
7.50	0.0	0.0	0.0	947.0	471.4	104.6	26.2	14265.4	0.0	688.8	47.0	2.0	0.1	0.0	16552.5	0.0
9.00	0.0	0.0	0.0	922.4	459.5	102.5	25.6	14321.2	0.0	691.3	47.2	2.0	0.1	0.0	16571.8	0.0
10.50	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
12.00	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
13.50	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
15.00	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
16.50	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
18.00	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
19.50	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
21.00	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
22.50	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
24.00	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
25.50	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
27.00	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
28.50	0.0	0.0	0.0	908.4	455.7	101.6	25.6	14322.6	0.0	699.0	48.4	2.0	0.1	0.0	16563.4	0.0
30.00	0.0	0.0	0.0	2141.7	926.6	202.6	46.3	29162.0	0.0	1106.7	62.5	2.4	0.1	0.0	33650.9	1679.8

LMFBR-10
HOMOGENEOUS U3O8/TH/TH AXIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	24.8	24.5
FINAL CORE	24.8	24.4
ANNUAL EQUILIBRIUM	8.3	8.1
30 YR CUMULATIVE	260.1	255.8
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	233.4
FINAL CORE	0.0	237.9
ANNUAL EQUILIBRIUM	0.0	103.7
30 YR CUMULATIVE	0.0	3106.6
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
NUMBER OF BATCHES		2
REFUEL TIME (YRS)		1.50
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		57500.0
THERMAL EFFICIENCY		0.365

LMFBR-10
HOMOGENEOUS U3U8/TH/TH AXIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	19766.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19766.5	0.0
1.50	9883.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.5	0.0
3.00	9883.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.5	0.0
4.50	9883.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.5	0.0
6.00	9883.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.5	0.0
7.50	9883.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.5	0.0
9.00	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
10.50	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
12.00	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
13.50	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
15.00	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
16.50	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
18.00	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
19.50	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
21.00	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
22.50	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
24.00	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
25.50	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
27.00	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0
28.50	9883.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9883.3	0.0

LMFBR-10
HOMOGENEOUS U3U8/TH/TH AXIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.50	9798.0	6.0	0.0	74.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9879.2	0.0
3.00	9713.0	6.0	0.0	146.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.8	0.0
4.50	9712.5	6.0	0.0	147.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.8	0.0
6.00	9712.2	6.0	0.0	147.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.7	0.0
7.50	9712.2	6.0	0.0	147.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.7	0.0
9.00	9712.2	6.0	0.0	147.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.7	0.0
10.50	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
12.00	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
13.50	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
15.00	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
16.50	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
18.00	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
19.50	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
21.00	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
22.50	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
24.00	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
25.50	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
27.00	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
28.50	9709.6	6.1	0.0	149.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9867.2	0.0
30.00	19505.6	12.3	0.0	225.6	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19746.2	21.6

LMFBR-10
HOMOGENEOUS U3U8/TH/TH RADIAL BLANKET

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	65.2	66.2
FINAL CORE	67.0	64.5
ANNUAL EQUILIBRIUM	11.2	11.0
30 YR CUMULATIVE	383.6	377.6
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	581.8
FINAL CORE	0.0	486.3
ANNUAL EQUILIBRIUM	0.0	139.9
30 YR CUMULATIVE	0.0	4211.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.2
FINAL CORE	0.0	0.1
ANNUAL EQUILIBRIUM	0.0	0.1
30 YR CUMULATIVE	0.0	1.8
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.50
POWER (GWE)		1.000
CAPACITY FACTOR		0.700
BURNUP (MWD/MT)		57500.0
THERMAL EFFICIENCY		0.365

LMFBR-10
HOMOGENEOUS U3U8/TH/TH RADIAL BLANKET
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	52014.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52014.0	0.0
1.50	13371.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13371.1	0.0
3.00	13371.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13371.1	0.0
4.50	13371.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13371.1	0.0
6.00	13371.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13371.1	0.0
7.50	13371.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13371.1	0.0
9.00	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
10.50	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
12.00	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
13.50	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
15.00	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
16.50	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
18.00	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
19.50	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
21.00	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
22.50	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
24.00	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
25.50	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
27.00	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0
28.50	13370.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13370.8	0.0

LMFBR-10
HOMOGENEOUS U3U8/TH/TH RADIAL BLANKET
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.50	13301.0	4.9	0.0	61.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13368.2	0.0
3.00	13231.3	4.9	0.0	123.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13360.6	0.0
4.50	13162.2	4.9	0.0	179.4	2.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13349.0	0.0
6.00	13141.7	4.9	0.0	197.7	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13347.1	0.0
7.50	13136.7	4.9	0.0	202.4	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13346.8	0.0
9.00	13136.6	4.9	0.0	202.5	2.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13346.2	0.0
10.50	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
12.00	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
13.50	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
15.00	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
16.50	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
18.00	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
19.50	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
21.00	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
22.50	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
24.00	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
25.50	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
27.00	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
28.50	13132.9	4.9	0.0	205.0	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13345.7	0.0
30.00	51479.4	16.8	0.0	469.5	4.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51970.5	44.3

PWR-1
LEU5 (U)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	400.7	101.7
FINAL CORE	578.6	233.8
ANNUAL EQUILIBRIUM	192.1	42.5
30 YR CUMULATIVE	5995.1	1448.8
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	208.0	2.1
FINAL CORE	350.9	82.8
ANNUAL EQUILIBRIUM	116.5	4.3
30 YR CUMULATIVE	3600.3	199.5
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	424.4
FINAL CORE	0.0	433.8
ANNUAL EQUILIBRIUM	0.0	177.2
30 YR CUMULATIVE	0.0	5486.5
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	579.5
FINAL CORE	0.0	568.2
ANNUAL EQUILIBRIUM	0.0	244.9
30 YR CUMULATIVE	0.0	7543.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1733.1	552.0
FINAL CORE	2438.6	1076.8
ANNUAL EQUILIBRIUM	809.4	218.9
30 YR CUMULATIVE	25310.2	7353.9

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	30363.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-1
LEU5 (U)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	565.0	0.0	33554.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	711.0	0.0	31524.0	0.0	0.0	0.0	0.0	0.0	0.0	32235.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	925.0	0.0	32037.0	0.0	0.0	0.0	0.0	0.0	0.0	32962.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	1071.0	0.0	33048.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33517.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	984.0	0.0	33135.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	1058.0	0.0	33061.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	1026.0	0.0	33519.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33091.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	1041.0	0.0	33504.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0

PWR-1
LEU5 (U)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	243.0	56.0	33158.0	0.0	137.0	42.0	20.0	4.0	0.0	33660.0	380.0
2.00	0.0	0.0	0.0	0.0	0.0	214.0	81.0	30948.0	0.0	145.0	58.0	31.0	10.0	0.0	31487.0	750.0
3.00	0.0	0.0	0.0	0.0	0.0	244.0	111.0	31302.0	0.0	166.0	69.0	40.0	14.0	0.0	31946.0	1065.0
4.00	0.0	0.0	0.0	0.0	0.0	304.0	127.0	32277.0	0.0	183.0	70.0	44.0	14.0	0.0	33019.0	1065.0
5.00	0.0	0.0	0.0	0.0	0.0	271.0	124.0	32706.0	0.0	183.0	73.0	45.0	16.0	0.0	33418.0	1065.0
6.00	0.0	0.0	0.0	0.0	0.0	261.0	118.0	32349.0	0.0	179.0	71.0	44.0	15.0	0.0	33037.0	1065.0
7.00	0.0	0.0	0.0	0.0	0.0	295.0	126.0	32282.0	0.0	182.0	70.0	44.0	15.0	0.0	33014.0	1065.0
8.00	0.0	0.0	0.0	0.0	0.0	274.0	123.0	32718.0	0.0	183.0	72.0	45.0	15.0	0.0	33430.0	1065.0
9.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
10.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
11.00	0.0	0.0	0.0	0.0	0.0	282.0	124.0	32706.0	0.0	183.0	72.0	45.0	15.0	0.0	33427.0	1065.0
12.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
13.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
14.00	0.0	0.0	0.0	0.0	0.0	282.0	124.0	32706.0	0.0	183.0	72.0	45.0	15.0	0.0	33427.0	1065.0
15.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
16.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
17.00	0.0	0.0	0.0	0.0	0.0	282.0	124.0	32706.0	0.0	183.0	72.0	45.0	15.0	0.0	33427.0	1065.0
18.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
19.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
20.00	0.0	0.0	0.0	0.0	0.0	282.0	124.0	32706.0	0.0	183.0	72.0	45.0	15.0	0.0	33427.0	1065.0
21.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
22.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
23.00	0.0	0.0	0.0	0.0	0.0	282.0	124.0	32706.0	0.0	183.0	72.0	45.0	15.0	0.0	33427.0	1065.0
24.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
25.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
26.00	0.0	0.0	0.0	0.0	0.0	282.0	124.0	32706.0	0.0	183.0	72.0	45.0	15.0	0.0	33427.0	1065.0
27.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
28.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
29.00	0.0	0.0	0.0	0.0	0.0	282.0	124.0	32706.0	0.0	183.0	72.0	45.0	15.0	0.0	33427.0	1065.0
30.00	0.0	0.0	0.0	0.0	0.0	278.0	123.0	32303.0	0.0	181.0	71.0	44.0	15.0	0.0	33015.0	1065.0
30.00	0.0	0.0	0.0	0.0	0.0	429.0	105.3	32716.4	1.7	161.4	51.3	28.8	6.4	9.0	33509.2	768.2
30.00	0.0	0.0	0.0	0.0	0.0	660.5	16.7	32973.5	0.3	125.2	24.0	10.5	1.1	3.6	33815.3	388.6

PWR-2
LEU5(U)-X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	463.4	75.5
FINAL CORE	840.4	324.7
ANNUAL EQUILIBRIUM	168.1	22.2
30 YR CUMULATIVE	5309.0	930.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	257.5	0.0
FINAL CORE	583.1	157.3
ANNUAL EQUILIBRIUM	116.6	1.2
30 YR CUMULATIVE	3613.8	185.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	459.7
FINAL CORE	0.0	490.4
ANNUAL EQUILIBRIUM	0.0	118.1
30 YR CUMULATIVE	0.0	3780.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	678.8
FINAL CORE	0.0	671.8
ANNUAL EQUILIBRIUM	0.0	181.6
30 YR CUMULATIVE	0.0	5699.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1980.1	447.5
FINAL CORE	3468.0	1432.3
ANNUAL EQUILIBRIUM	693.6	117.4
30 YR CUMULATIVE	21981.7	4687.9

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50650.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-2
LEU5(U)-X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2514.7	0.0	96974.3	0.0	0.0	0.0	0.0	0.0	0.0	99488.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	809.2	0.0	19676.4	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
2.00	0.0	0.0	0.0	0.0	0.0	809.2	0.0	19676.4	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
5.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
6.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	880.9	0.0	19604.7	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0

PWR-2
LEU5(U)-X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	140.8	34.9	19882.4	0.4	80.4	29.0	13.0	2.8	2.7	20186.4	300.0
2.00	0.0	0.0	0.0	0.0	0.0	125.7	50.8	19677.7	1.2	91.2	37.8	20.1	6.4	4.9	20015.7	469.1
3.00	0.0	0.0	0.0	0.0	0.0	110.5	63.8	18133.0	2.3	92.1	42.9	24.1	9.7	7.3	18485.8	609.6
4.00	0.0	0.0	0.0	0.0	0.0	86.7	75.7	18012.3	3.9	95.7	50.1	28.6	14.6	10.2	18377.8	787.8
5.00	0.0	0.0	0.0	0.0	0.0	104.6	95.0	18880.2	5.3	106.1	55.1	32.5	16.8	12.9	19308.6	941.2
6.00	0.0	0.0	0.0	0.0	0.0	156.3	109.8	19025.3	5.3	114.0	54.1	33.2	14.5	13.7	19526.2	957.1
7.00	0.0	0.0	0.0	0.0	0.0	129.0	112.3	18954.8	6.4	113.2	57.2	34.8	17.3	15.1	19440.3	1041.8
8.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
9.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
10.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
11.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
12.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
13.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
14.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
15.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
16.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
17.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
18.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
19.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
20.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
21.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
22.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
23.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
24.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
25.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
26.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
27.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
28.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
29.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
30.00	0.0	0.0	0.0	0.0	0.0	149.1	122.3	18873.8	6.8	114.7	56.9	35.3	16.9	16.1	19391.8	1076.7
30.00	0.0	0.0	0.0	0.0	0.0	215.4	115.1	19012.3	4.5	116.4	49.9	31.4	11.5	13.0	19569.7	902.3
30.00	0.0	0.0	0.0	0.0	0.0	318.3	100.8	19165.7	2.3	114.5	39.1	24.5	6.2	9.2	19780.6	693.1
30.00	0.0	0.0	0.0	0.0	0.0	463.4	77.3	19319.4	0.8	102.8	24.8	14.5	2.1	5.1	20010.3	463.0
30.00	0.0	0.0	0.0	0.0	0.0	672.6	39.5	19476.9	0.1	65.6	8.1	3.1	0.2	0.0	20266.1	203.3

PWR-3
LEU5,PU(U)-RUPU MAKEUP

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	400.7	102.0
FINAL CORE	402.0	178.9
ANNUAL EQUILIBRIUM	134.0	33.1
30 YR CUMULATIVE	4548.7	1182.9
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	206.1	2.2
FINAL CORE	250.9	73.4
ANNUAL EQUILIBRIUM	83.6	5.9
30 YR CUMULATIVE	2777.1	219.6
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	410.2
FINAL CORE	0.0	274.0
ANNUAL EQUILIBRIUM	0.0	115.7
30 YR CUMULATIVE	0.0	3985.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	559.1
FINAL CORE	0.0	353.0
ANNUAL EQUILIBRIUM	0.0	158.3
30 YR CUMULATIVE	0.0	5434.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1733.1	552.8
FINAL CORE	1686.6	805.5
ANNUAL EQUILIBRIUM	562.2	163.8
30 YR CUMULATIVE	19154.3	5857.5
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.270
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30360.0
THERMAL EFFICIENCY		0.334

PWR-3
LEU5, PU(U)-RUPU MAKEUP
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2201.0	0.0	97112.0	0.0	0.0	0.0	0.0	0.0	0.0	99313.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	1071.0	0.0	33048.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33517.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	828.0	0.0	26467.0	0.0	0.0	0.0	0.0	0.0	0.0	27295.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	886.0	0.0	26409.0	0.0	0.0	0.0	0.0	0.0	0.0	27295.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	800.0	0.0	25216.0	0.0	0.0	0.0	0.0	0.0	0.0	26016.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	791.0	0.0	24798.0	0.0	0.0	0.0	0.0	0.0	0.0	25589.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	811.0	0.0	24778.0	0.0	0.0	0.0	0.0	0.0	0.0	25589.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	763.0	0.0	23547.0	0.0	0.0	0.0	0.0	0.0	0.0	24310.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	746.0	0.0	23137.0	0.0	0.0	0.0	0.0	0.0	0.0	23883.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	755.0	0.0	23128.0	0.0	0.0	0.0	0.0	0.0	0.0	23883.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	754.0	0.0	23556.0	0.0	0.0	0.0	0.0	0.0	0.0	24310.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	742.0	0.0	23141.0	0.0	0.0	0.0	0.0	0.0	0.0	23883.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	726.0	0.0	21451.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	721.0	0.0	21883.0	0.0	0.0	0.0	0.0	0.0	0.0	22604.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	709.0	0.0	21468.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	718.0	0.0	21886.0	0.0	0.0	0.0	0.0	0.0	0.0	22604.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	708.0	0.0	21469.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0

PWR -3

LEU5,PU(U)-RUPU MAKEUP
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	235.0	55.0	33167.0	0.0	137.0	42.0	21.0	4.0	0.0	33661.0	380.0
2.00	0.0	0.0	0.0	0.0	0.0	219.0	81.0	30933.0	0.0	135.0	54.0	29.0	9.0	0.0	31460.0	730.0
3.00	0.0	0.0	0.0	0.0	0.0	248.0	110.0	31291.0	0.0	160.0	66.0	39.0	14.0	0.0	31928.0	1108.0
4.00	0.0	0.0	0.0	0.0	0.0	301.0	127.0	32271.0	0.0	183.0	70.0	44.0	14.0	0.0	33010.0	1120.0
5.00	0.0	0.0	0.0	0.0	0.0	282.0	123.0	32729.0	0.0	182.0	71.0	44.0	15.0	0.0	33446.0	1123.0
6.00	0.0	0.0	0.0	0.0	0.0	226.0	99.0	25838.0	0.0	145.0	57.0	35.0	12.0	0.0	26412.0	917.0
7.00	0.0	0.0	0.0	0.0	0.0	260.0	104.0	25800.0	0.0	147.0	55.0	35.0	11.0	0.0	26412.0	917.0
8.00	0.0	0.0	0.0	0.0	0.0	222.0	95.0	24621.0	0.0	139.0	54.0	33.0	11.0	0.0	25175.0	874.0
9.00	0.0	0.0	0.0	0.0	0.0	220.0	94.0	24214.0	0.0	137.0	53.0	33.0	11.0	0.0	24762.0	860.0
10.00	0.0	0.0	0.0	0.0	0.0	232.0	96.0	24200.0	0.0	137.0	52.0	33.0	11.0	0.0	24761.0	860.0
11.00	0.0	0.0	0.0	0.0	0.0	216.0	90.0	22996.0	0.0	130.0	50.0	31.0	10.0	0.0	23523.0	817.0
12.00	0.0	0.0	0.0	0.0	0.0	210.0	88.0	22594.0	0.0	128.0	49.0	31.0	10.0	0.0	23110.0	803.0
13.00	0.0	0.0	0.0	0.0	0.0	216.0	89.0	22588.0	0.0	128.0	49.0	31.0	10.0	0.0	23111.0	803.0
14.00	0.0	0.0	0.0	0.0	0.0	211.0	90.0	23002.0	0.0	130.0	50.0	31.0	10.0	0.0	23524.0	817.0
15.00	0.0	0.0	0.0	0.0	0.0	208.0	88.0	22597.0	0.0	128.0	49.0	31.0	10.0	0.0	23111.0	803.0
16.00	0.0	0.0	0.0	0.0	0.0	215.0	85.0	20958.0	0.0	120.0	45.0	28.0	9.0	0.0	21460.0	745.0
17.00	0.0	0.0	0.0	0.0	0.0	208.0	85.0	21374.0	0.0	122.0	46.0	29.0	9.0	0.0	21873.0	760.0
18.00	0.0	0.0	0.0	0.0	0.0	205.0	84.0	20969.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
19.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
20.00	0.0	0.0	0.0	0.0	0.0	206.0	85.0	21376.0	0.0	121.0	46.0	29.0	9.0	0.0	21872.0	760.0
21.00	0.0	0.0	0.0	0.0	0.0	204.0	84.0	20970.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
22.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
23.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
24.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
25.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
26.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
27.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
28.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
29.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
30.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	745.0
30.00	0.0	0.0	0.0	0.0	0.0	326.0	69.0	21153.0	0.8	104.0	30.0	16.0	3.0	5.0	21706.8	468.0
30.00	0.0	0.0	0.0	0.0	0.0	489.0	41.0	21314.0	0.1	76.0	12.0	5.0	0.4	2.0	21939.5	235.0

PWR -3
LEU5,PU(U)-RUPU RECYCLE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	35.0	19.0
ANNUAL EQUILIBRIUM	11.7	4.2
30 YR CUMULATIVE	287.6	100.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.3	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	793.7	610.2
ANNUAL EQUILIBRIUM	264.6	177.2
30 YR CUMULATIVE	6240.9	4195.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	1308.7	1099.4
ANNUAL EQUILIBRIUM	436.2	331.5
30 YR CUMULATIVE	9874.8	7612.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	191.3	127.6
ANNUAL EQUILIBRIUM	63.8	33.9
30 YR CUMULATIVE	1574.0	825.2
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.270
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30360.0
THERMAL EFFICIENCY		0.334

PWR-3
LEUS,PU(U)-RUPU RECYCLE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	19.0	5.0	6427.0	0.0	64.0	47.0	27.0	12.0	0.0	6601.0	180.0
7.00	0.0	0.0	0.0	0.0	0.0	21.0	5.0	6395.0	0.0	72.0	56.0	32.0	17.0	0.0	6598.0	180.0
8.00	0.0	0.0	0.0	0.0	0.0	26.0	6.0	8006.0	0.0	84.0	64.0	38.0	23.0	0.0	8247.0	225.0
9.00	0.0	0.0	0.0	0.0	0.0	27.0	6.0	7990.0	0.0	92.0	69.0	41.0	23.0	0.0	8248.0	225.0
10.00	0.0	0.0	0.0	0.0	0.0	27.0	6.0	7989.0	0.0	92.0	69.0	41.0	23.0	0.0	8247.0	225.0
11.00	0.0	0.0	0.0	0.0	0.0	33.0	7.0	9564.0	0.0	112.0	90.0	54.0	33.0	0.0	9893.0	270.0
12.00	0.0	0.0	0.0	0.0	0.0	34.0	7.0	9543.0	0.0	118.0	96.0	57.0	36.0	0.0	9891.0	270.0
13.00	0.0	0.0	0.0	0.0	0.0	35.0	7.0	9526.0	0.0	121.0	100.0	60.0	41.0	0.0	9890.0	270.0
14.00	0.0	0.0	0.0	0.0	0.0	36.0	7.0	9518.0	0.0	125.0	103.0	61.0	41.0	0.0	9891.0	270.0
15.00	0.0	0.0	0.0	0.0	0.0	36.0	7.0	9517.0	0.0	125.0	103.0	61.0	41.0	0.0	9890.0	270.0
16.00	0.0	0.0	0.0	0.0	0.0	40.0	8.0	11121.0	0.0	134.0	114.0	68.0	51.0	0.0	11536.0	316.0
17.00	0.0	0.0	0.0	0.0	0.0	41.0	8.0	11109.0	0.0	138.0	117.0	70.0	54.0	0.0	11537.0	316.0
18.00	0.0	0.0	0.0	0.0	0.0	41.0	8.0	11097.0	0.0	140.0	120.0	72.0	57.0	0.0	11535.0	316.0
19.00	0.0	0.0	0.0	0.0	0.0	42.0	8.0	11086.0	0.0	144.0	123.0	74.0	57.0	0.0	11534.0	316.0
20.00	0.0	0.0	0.0	0.0	0.0	42.0	8.0	11088.0	0.0	143.0	123.0	73.0	57.0	0.0	11534.0	316.0
21.00	0.0	0.0	0.0	0.0	0.0	42.0	8.0	11070.0	0.0	145.0	126.0	75.0	64.0	0.0	11530.0	315.0
22.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
23.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
24.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
25.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
26.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
27.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
28.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
29.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
30.00	0.0	0.0	0.0	0.0	0.0	43.0	8.0	11057.0	0.0	148.0	130.0	77.0	66.0	0.0	11529.0	315.0
30.00	0.0	0.0	0.0	0.0	0.0	53.0	6.0	11147.0	1.0	174.0	144.0	83.0	65.0	1.2	11674.2	244.0
30.00	0.0	0.0	0.0	0.0	0.0	66.0	3.0	11228.0	0.2	207.0	152.0	86.0	63.0	0.5	11805.7	122.0

PWR-3
LEU5,PU(U)-RUPU RECYCLE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	47.0	0.0	6583.0	0.0	132.0	40.0	18.0	4.0	0.0	6824.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	47.0	0.0	6545.0	0.0	140.0	56.0	27.0	9.0	0.0	6824.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	59.0	0.0	8196.0	0.0	160.0	66.0	35.0	14.0	0.0	8530.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	59.0	0.0	8174.0	0.0	176.0	68.0	38.0	14.0	0.0	8529.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	59.0	0.0	8174.0	0.0	176.0	69.0	38.0	14.0	0.0	8530.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9786.0	0.0	202.0	100.0	54.0	23.0	0.0	10235.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9761.0	0.0	212.0	107.0	58.0	27.0	0.0	10235.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9742.0	0.0	215.0	114.0	62.0	33.0	0.0	10236.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9732.0	0.0	220.0	117.0	64.0	33.0	0.0	10236.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9731.0	0.0	221.0	117.0	64.0	33.0	0.0	10236.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	82.0	0.0	11376.0	0.0	233.0	135.0	74.0	42.0	0.0	11942.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11363.0	0.0	237.0	140.0	76.0	45.0	0.0	11942.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11349.0	0.0	241.0	144.0	78.0	49.0	0.0	11942.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11337.0	0.0	246.0	147.0	80.0	50.0	0.0	11941.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11341.0	0.0	244.0	147.0	80.0	49.0	0.0	11942.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11320.0	0.0	246.0	153.0	83.0	58.0	0.0	11941.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0

PWR-4
LEU5,PU(U)-RUPU,X PART 1 (MAKEUP)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	463.4	75.5
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	139.5	18.4
30 YR CUMULATIVE	4634.3	554.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	257.5	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	96.8	1.0
30 YR CUMULATIVE	3145.6	25.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	459.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	98.0
30 YR CUMULATIVE	0.0	3018.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	678.8
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	150.6
30 YR CUMULATIVE	0.0	4609.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1980.1	447.5
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	575.5	97.4
30 YR CUMULATIVE	19197.5	2985.1

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50650.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-4
LEU5,PU(U)-RUPU,X PART 1 (MAKEUP)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2514.7	0.0	96974.3	0.0	0.0	0.0	0.0	0.0	0.0	99488.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	809.2	0.0	19676.4	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
2.00	0.0	0.0	0.0	0.0	0.0	809.2	0.0	19676.4	0.0	0.0	0.0	0.0	0.0	0.0	20485.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	811.8	0.0	18067.8	0.0	0.0	0.0	0.0	0.0	0.0	18879.7	0.0
4.00	0.0	0.0	0.0	0.0	0.0	798.7	0.0	17775.9	0.0	0.0	0.0	0.0	0.0	0.0	18574.6	0.0
5.00	0.0	0.0	0.0	0.0	0.0	795.0	0.0	17693.4	0.0	0.0	0.0	0.0	0.0	0.0	18488.4	0.0
6.00	0.0	0.0	0.0	0.0	0.0	788.8	0.0	17556.5	0.0	0.0	0.0	0.0	0.0	0.0	18345.3	0.0
7.00	0.0	0.0	0.0	0.0	0.0	778.3	0.0	17322.8	0.0	0.0	0.0	0.0	0.0	0.0	18101.1	0.0
8.00	0.0	0.0	0.0	0.0	0.0	772.3	0.0	17187.6	0.0	0.0	0.0	0.0	0.0	0.0	17959.9	0.0
9.00	0.0	0.0	0.0	0.0	0.0	771.5	0.0	17170.0	0.0	0.0	0.0	0.0	0.0	0.0	17941.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	760.7	0.0	16929.1	0.0	0.0	0.0	0.0	0.0	0.0	17689.8	0.0
11.00	0.0	0.0	0.0	0.0	0.0	755.7	0.0	16818.7	0.0	0.0	0.0	0.0	0.0	0.0	17574.4	0.0
12.00	0.0	0.0	0.0	0.0	0.0	754.4	0.0	16788.9	0.0	0.0	0.0	0.0	0.0	0.0	17543.2	0.0
13.00	0.0	0.0	0.0	0.0	0.0	753.2	0.0	16762.4	0.0	0.0	0.0	0.0	0.0	0.0	17515.6	0.0
14.00	0.0	0.0	0.0	0.0	0.0	749.2	0.0	16673.9	0.0	0.0	0.0	0.0	0.0	0.0	17423.1	0.0
15.00	0.0	0.0	0.0	0.0	0.0	745.8	0.0	16599.3	0.0	0.0	0.0	0.0	0.0	0.0	17345.2	0.0
16.00	0.0	0.0	0.0	0.0	0.0	746.5	0.0	16614.0	0.0	0.0	0.0	0.0	0.0	0.0	17360.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	736.7	0.0	16396.4	0.0	0.0	0.0	0.0	0.0	0.0	17133.1	0.0
18.00	0.0	0.0	0.0	0.0	0.0	734.4	0.0	16344.0	0.0	0.0	0.0	0.0	0.0	0.0	17078.4	0.0
19.00	0.0	0.0	0.0	0.0	0.0	733.7	0.0	16329.9	0.0	0.0	0.0	0.0	0.0	0.0	17063.6	0.0
20.00	0.0	0.0	0.0	0.0	0.0	732.8	0.0	16309.4	0.0	0.0	0.0	0.0	0.0	0.0	17042.2	0.0
21.00	0.0	0.0	0.0	0.0	0.0	730.9	0.0	16267.3	0.0	0.0	0.0	0.0	0.0	0.0	16998.3	0.0
22.00	0.0	0.0	0.0	0.0	0.0	729.7	0.0	16241.0	0.0	0.0	0.0	0.0	0.0	0.0	16970.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	729.7	0.0	16239.3	0.0	0.0	0.0	0.0	0.0	0.0	16968.9	0.0
24.00	0.0	0.0	0.0	0.0	0.0	724.7	0.0	16128.6	0.0	0.0	0.0	0.0	0.0	0.0	16853.3	0.0
25.00	0.0	0.0	0.0	0.0	0.0	723.5	0.0	16101.7	0.0	0.0	0.0	0.0	0.0	0.0	16825.2	0.0
26.00	0.0	0.0	0.0	0.0	0.0	723.2	0.0	16094.5	0.0	0.0	0.0	0.0	0.0	0.0	16817.7	0.0
27.00	0.0	0.0	0.0	0.0	0.0	723.7	0.0	16106.3	0.0	0.0	0.0	0.0	0.0	0.0	16830.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	721.8	0.0	16063.5	0.0	0.0	0.0	0.0	0.0	0.0	16785.3	0.0
29.00	0.0	0.0	0.0	0.0	0.0	721.2	0.0	16050.6	0.0	0.0	0.0	0.0	0.0	0.0	16771.8	0.0

PWR-4
LEU5,PU(U)-RUPU,X PART 1 (MAKEUP)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	140.8	34.9	19882.4	0.4	80.4	29.0	13.0	2.8	2.7	20186.4	300.0
2.00	0.0	0.0	0.0	0.0	0.0	125.7	50.8	19677.7	1.2	91.2	37.8	20.1	6.4	4.9	20015.7	469.1
3.00	0.0	0.0	0.0	0.0	0.0	110.5	63.8	18133.0	2.3	92.1	42.9	24.1	9.7	7.3	18485.8	609.6
4.00	0.0	0.0	0.0	0.0	0.0	86.7	75.7	18012.3	3.9	95.7	50.1	28.6	14.6	10.2	18377.8	787.8
5.00	0.0	0.0	0.0	0.0	0.0	104.6	95.0	18880.2	5.3	106.1	55.1	32.5	16.8	12.9	19308.6	941.2
6.00	0.0	0.0	0.0	0.0	0.0	156.3	109.8	19025.3	5.3	114.0	54.1	33.2	14.5	13.7	19526.2	957.1
7.00	0.0	0.0	0.0	0.0	0.0	129.0	112.3	18954.8	6.4	113.2	57.2	34.8	17.3	15.1	19440.3	1041.0
8.00	0.0	0.0	0.0	0.0	0.0	137.4	112.6	17382.8	6.3	105.7	52.4	32.5	15.6	14.8	17859.8	991.6
9.00	0.0	0.0	0.0	0.0	0.0	135.1	110.8	17099.6	6.2	103.9	51.5	31.9	15.3	14.5	17569.0	975.5
10.00	0.0	0.0	0.0	0.0	0.0	134.5	110.3	17024.1	6.2	103.5	51.3	31.8	15.2	14.5	17491.4	971.1
11.00	0.0	0.0	0.0	0.0	0.0	133.6	109.5	16910.9	6.1	102.8	50.9	31.6	15.1	14.4	17375.0	964.7
12.00	0.0	0.0	0.0	0.0	0.0	131.6	108.1	16684.4	6.0	101.4	50.3	31.2	14.9	14.2	17142.1	951.8
13.00	0.0	0.0	0.0	0.0	0.0	130.7	107.1	16542.9	6.0	100.6	49.8	30.9	14.8	14.1	16996.9	943.7
14.00	0.0	0.0	0.0	0.0	0.0	130.6	107.1	16531.5	6.0	100.5	49.8	30.9	14.8	14.1	16985.2	943.0
15.00	0.0	0.0	0.0	0.0	0.0	128.7	105.5	16288.1	5.9	99.0	49.1	30.4	14.6	13.9	16735.1	929.2
16.00	0.0	0.0	0.0	0.0	0.0	127.9	104.8	16182.4	5.9	98.4	48.8	30.2	14.5	13.8	16626.5	923.6
17.00	0.0	0.0	0.0	0.0	0.0	127.6	104.6	16154.1	5.8	98.2	48.7	30.2	14.5	13.8	16597.4	921.5
18.00	0.0	0.0	0.0	0.0	0.0	127.3	104.4	16112.5	5.8	97.9	48.5	30.1	14.4	13.7	16554.8	919.1
19.00	0.0	0.0	0.0	0.0	0.0	126.6	103.8	16027.6	5.8	97.4	48.3	29.9	14.3	13.6	16467.5	914.3
20.00	0.0	0.0	0.0	0.0	0.0	126.3	103.5	15974.8	5.8	97.1	48.1	29.8	14.3	13.6	16413.3	911.3
21.00	0.0	0.0	0.0	0.0	0.0	126.2	103.4	15971.0	5.8	97.1	48.1	29.8	14.3	13.6	16409.3	911.1
22.00	0.0	0.0	0.0	0.0	0.0	124.7	102.2	15778.5	5.7	95.9	47.5	29.5	14.3	13.4	16211.7	900.1
23.00	0.0	0.0	0.0	0.0	0.0	124.3	101.9	15727.5	5.7	95.6	47.4	29.4	14.1	13.4	16159.2	897.2
24.00	0.0	0.0	0.0	0.0	0.0	124.2	101.8	15714.3	5.7	95.5	47.3	29.3	14.1	13.4	16145.6	896.4
25.00	0.0	0.0	0.0	0.0	0.0	124.0	101.7	15695.4	5.7	95.4	47.3	29.3	14.0	13.4	16126.2	895.3
26.00	0.0	0.0	0.0	0.0	0.0	123.7	101.4	15655.8	5.7	95.2	47.2	29.2	14.0	13.3	16085.5	893.1
27.00	0.0	0.0	0.0	0.0	0.0	123.5	101.3	15631.3	5.7	95.0	47.1	29.2	14.0	13.3	16060.3	891.7
28.00	0.0	0.0	0.0	0.0	0.0	123.5	101.2	15629.4	5.7	95.0	47.1	29.2	14.0	13.3	16058.3	891.6
29.00	0.0	0.0	0.0	0.0	0.0	122.7	100.6	15527.5	5.6	94.4	46.8	29.0	13.9	13.2	15953.6	885.8
30.00	0.0	0.0	0.0	0.0	0.0	122.5	100.4	15501.0	5.6	94.2	46.7	28.9	13.9	13.2	15926.5	884.3

PWR-4
LEU5,PU(U)-RUPU,X PART 2 (RECYCLE)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	3.1	1.2
30 YR CUMULATIVE	74.7	21.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	193.8	126.4
30 YR CUMULATIVE	4375.4	2243.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	332.5	257.4
30 YR CUMULATIVE	7324.3	4380.6
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	17.2	9.4
30 YR CUMULATIVE	408.7	175.3

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50650.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-4
LEU5,PU(U)-RUPU,X PART 2 (RECYCLE)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	10.5	0.0	1473.2	0.0	79.2	28.5	11.5	2.8	0.0	1605.9	0.0
4.00	0.0	0.0	0.0	0.0	0.0	12.5	0.0	1747.4	0.0	89.8	37.2	17.8	6.3	0.0	1910.9	0.0
5.00	0.0	0.0	0.0	0.0	0.0	13.0	0.0	1820.1	0.0	90.7	42.3	21.4	9.6	0.0	1997.1	0.0
6.00	0.0	0.0	0.0	0.0	0.0	13.9	0.0	1942.7	0.0	94.3	49.3	25.4	14.6	0.0	2140.2	0.0
7.00	0.0	0.0	0.0	0.0	0.0	15.5	0.0	2164.8	0.0	104.5	54.3	28.8	16.5	0.0	2384.4	0.0
8.00	0.0	0.0	0.0	0.0	0.0	16.5	0.0	2300.5	0.0	112.3	53.3	29.4	14.3	0.0	2526.3	0.0
9.00	0.0	0.0	0.0	0.0	0.0	16.5	0.0	2311.8	0.0	111.5	56.3	30.9	17.0	0.0	2544.1	0.0
10.00	0.0	0.0	0.0	0.0	0.0	17.8	0.0	2486.1	0.0	139.8	81.6	44.1	26.4	0.0	2795.7	0.0
11.00	0.0	0.0	0.0	0.0	0.0	18.5	0.0	2586.7	0.0	144.8	86.4	46.5	28.3	0.0	2911.1	0.0
12.00	0.0	0.0	0.0	0.0	0.0	18.7	0.0	2613.8	0.0	146.1	87.7	47.2	28.8	0.0	2942.3	0.0
13.00	0.0	0.0	0.0	0.0	0.0	19.0	0.0	2654.5	0.0	148.2	89.6	48.1	29.5	0.0	2988.9	0.0
14.00	0.0	0.0	0.0	0.0	0.0	19.6	0.0	2735.6	0.0	152.2	93.5	50.1	31.0	0.0	3082.1	0.0
15.00	0.0	0.0	0.0	0.0	0.0	19.9	0.0	2786.5	0.0	154.8	95.9	51.3	31.9	0.0	3140.4	0.0
16.00	0.0	0.0	0.0	0.0	0.0	20.0	0.0	2790.5	0.0	155.0	96.1	51.4	32.0	0.0	3145.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	21.0	0.0	2928.0	0.0	175.5	123.1	61.4	43.5	0.0	3352.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	21.3	0.0	2974.8	0.0	178.0	125.9	62.6	44.6	0.0	3407.1	0.0
19.00	0.0	0.0	0.0	0.0	0.0	21.4	0.0	2987.4	0.0	178.7	126.6	62.9	44.9	0.0	3421.9	0.0
20.00	0.0	0.0	0.0	0.0	0.0	21.5	0.0	3005.7	0.0	179.7	127.7	63.4	45.3	0.0	3443.3	0.0
21.00	0.0	0.0	0.0	0.0	0.0	21.8	0.0	3043.3	0.0	181.8	129.9	64.4	46.2	0.0	3487.3	0.0
22.00	0.0	0.0	0.0	0.0	0.0	22.0	0.0	3066.8	0.0	183.0	131.3	65.0	46.7	0.0	3514.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	22.0	0.0	3068.4	0.0	183.1	131.3	65.1	46.8	0.0	3516.6	0.0
24.00	0.0	0.0	0.0	0.0	0.0	22.4	0.0	3130.5	0.0	196.7	155.2	71.0	56.4	0.0	3632.3	0.0
25.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	3154.2	0.0	198.0	156.8	71.7	57.0	0.0	3660.3	0.0
26.00	0.0	0.0	0.0	0.0	0.0	22.6	0.0	3160.5	0.0	198.4	157.2	71.9	57.3	0.0	3667.9	0.0
27.00	0.0	0.0	0.0	0.0	0.0	22.7	0.0	3169.2	0.0	198.9	157.8	72.1	57.5	0.0	3678.3	0.0
28.00	0.0	0.0	0.0	0.0	0.0	22.8	0.0	3187.7	0.0	200.0	159.1	72.6	58.0	0.0	3700.2	0.0
29.00	0.0	0.0	0.0	0.0	0.0	22.9	0.0	3199.1	0.0	200.6	159.9	72.9	58.3	0.0	3713.7	0.0

PWR-4
LEU5,PU(U)-RUPU,X PART 2 (RECYCLE)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	4.9	1.2	1425.4	1.1	36.2	30.4	17.3	11.3	0.4	1528.3	83.3
9.00	0.0	0.0	0.0	0.0	0.0	5.9	1.5	1693.9	1.3	43.0	36.2	20.5	13.4	0.5	1816.2	98.9
10.00	0.0	0.0	0.0	0.0	0.0	6.1	1.5	1766.0	1.4	44.9	37.7	21.4	14.0	0.5	1893.5	103.1
11.00	0.0	0.0	0.0	0.0	0.0	6.5	1.6	1874.1	1.5	47.6	40.0	22.7	14.8	0.5	2009.5	109.5
12.00	0.0	0.0	0.0	0.0	0.0	7.3	1.8	2090.3	1.7	53.1	44.6	25.3	16.5	0.6	2241.3	122.1
13.00	0.0	0.0	0.0	0.0	0.0	7.7	1.9	2225.5	1.8	56.6	47.5	27.0	17.6	0.6	2386.2	130.0
14.00	0.0	0.0	0.0	0.0	0.0	7.8	1.9	2236.3	1.8	56.8	47.8	27.1	17.7	0.6	2397.8	130.6
15.00	0.0	0.0	0.0	0.0	0.0	9.1	2.0	2405.4	2.3	79.1	75.9	38.8	29.5	0.6	2642.9	144.2
16.00	0.0	0.0	0.0	0.0	0.0	9.4	2.1	2503.7	2.4	82.4	79.0	40.4	30.8	0.7	2750.9	150.1
17.00	0.0	0.0	0.0	0.0	0.0	9.5	2.1	2530.1	2.5	83.2	79.9	40.8	31.1	0.7	2779.9	151.7
18.00	0.0	0.0	0.0	0.0	0.0	9.7	2.1	2568.7	2.5	84.5	81.1	41.4	31.6	0.7	2822.3	154.0
19.00	0.0	0.0	0.0	0.0	0.0	10.0	2.2	2647.7	2.6	87.1	83.6	42.7	32.5	0.7	2909.1	158.8
20.00	0.0	0.0	0.0	0.0	0.0	10.2	2.2	2696.9	2.6	88.7	85.1	43.5	33.1	0.7	2963.1	161.1
21.00	0.0	0.0	0.0	0.0	0.0	10.2	2.2	2700.4	2.6	88.8	85.2	43.6	33.2	0.7	2967.0	161.9
22.00	0.0	0.0	0.0	0.0	0.0	11.5	2.3	2835.5	3.1	103.8	110.0	50.7	43.1	0.8	3160.7	172.7
23.00	0.0	0.0	0.0	0.0	0.0	11.7	2.3	2882.2	3.1	105.5	111.8	51.5	43.8	0.8	3212.7	175.5
24.00	0.0	0.0	0.0	0.0	0.0	11.7	2.3	2894.3	3.1	105.9	112.3	51.7	44.0	0.8	3226.2	176.2
25.00	0.0	0.0	0.0	0.0	0.0	11.8	2.3	2911.6	3.1	106.5	113.0	52.0	44.3	0.8	3245.5	177.3
26.00	0.0	0.0	0.0	0.0	0.0	11.9	2.4	2947.9	3.2	107.9	118.4	52.7	44.8	0.8	3290.0	179.5
27.00	0.0	0.0	0.0	0.0	0.0	12.0	2.4	2970.4	3.2	108.7	110.2	53.1	45.2	0.8	3306.0	180.9
28.00	0.0	0.0	0.0	0.0	0.0	12.0	2.4	2972.1	3.2	108.8	115.3	53.1	45.2	0.8	3312.9	181.0
29.00	0.0	0.0	0.0	0.0	0.0	12.7	2.4	3033.8	3.4	118.8	134.1	56.9	52.0	0.8	3415.1	186.7
30.00	0.0	0.0	0.0	0.0	0.0	12.8	2.4	3057.8	3.5	119.8	135.2	57.4	52.4	0.8	3442.0	188.1

PWR-5
PU(TH)-RPU

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	87.9	86.7
FINAL CORE	80.6	79.6
ANNUAL EQUILIBRIUM	27.1	26.6
30 YR CUMULATIVE	883.9	868.9
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.3
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.3
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.3
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	2463.8	1051.9
FINAL CORE	4840.2	3345.9
ANNUAL EQUILIBRIUM	1563.8	860.0
30 YR CUMULATIVE	45022.9	23631.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	3486.6	2019.2
FINAL CORE	9363.8	7471.9
ANNUAL EQUILIBRIUM	2947.2	2044.6
30 YR CUMULATIVE	80062.1	54072.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	723.6
FINAL CORE	0.0	578.4
ANNUAL EQUILIBRIUM	0.0	270.1
30 YR CUMULATIVE	0.0	8478.4
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	5.8
FINAL CORE	0.0	3.9
ANNUAL EQUILIBRIUM	0.0	2.6
30 YR CUMULATIVE	0.0	84.3

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-5
PU(TH)-RPU
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	89091.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2552.0	1071.0	577.0	228.0	0.0	93519.0	0.0
1.00	29065.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1141.0	479.0	258.0	102.0	0.0	31045.0	0.0
2.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
3.00	28468.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1227.0	821.0	444.0	223.0	0.0	31183.0	0.0
4.00	28468.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1227.0	821.0	444.0	223.0	0.0	31183.0	0.0
5.00	28468.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1227.0	821.0	444.0	223.0	0.0	31183.0	0.0
6.00	28468.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1227.0	821.0	444.0	223.0	0.0	31183.0	0.0
7.00	28468.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1227.0	821.0	444.0	223.0	0.0	31183.0	0.0
8.00	28030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1265.0	1022.0	536.0	324.0	0.0	31177.0	0.0
9.00	28030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1265.0	1022.0	536.0	324.0	0.0	31177.0	0.0
10.00	28030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1265.0	1022.0	536.0	324.0	0.0	31177.0	0.0
11.00	28030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1265.0	1022.0	536.0	324.0	0.0	31177.0	0.0
12.00	28030.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1265.0	1022.0	536.0	324.0	0.0	31177.0	0.0
13.00	27697.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1313.0	1167.0	594.0	406.0	0.0	31177.0	0.0
14.00	27697.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1313.0	1167.0	594.0	406.0	0.0	31177.0	0.0
15.00	27697.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1313.0	1167.0	594.0	406.0	0.0	31177.0	0.0
16.00	27697.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1313.0	1167.0	594.0	406.0	0.0	31177.0	0.0
17.00	27697.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1313.0	1167.0	594.0	406.0	0.0	31177.0	0.0
18.00	27433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1356.0	1285.0	630.0	472.0	0.0	31176.0	0.0
19.00	27433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1356.0	1285.0	630.0	472.0	0.0	31176.0	0.0
20.00	27433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1356.0	1285.0	630.0	472.0	0.0	31176.0	0.0
21.00	27433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1356.0	1285.0	630.0	472.0	0.0	31176.0	0.0
22.00	27433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1356.0	1285.0	630.0	472.0	0.0	31176.0	0.0
23.00	27217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1390.0	1386.0	659.0	529.0	0.0	31181.0	0.0
24.00	27217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1390.0	1386.0	659.0	529.0	0.0	31181.0	0.0
25.00	27217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1390.0	1386.0	659.0	529.0	0.0	31181.0	0.0
26.00	27217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1390.0	1386.0	659.0	529.0	0.0	31181.0	0.0
27.00	27217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1390.0	1386.0	659.0	529.0	0.0	31181.0	0.0
28.00	27217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1390.0	1386.0	659.0	529.0	0.0	31181.0	0.0
29.00	27217.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1390.0	1386.0	659.0	529.0	0.0	31181.0	0.0

PWR-5
PU(TH)-RPU
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	30134.0	0.0	0.3	197.0	9.8	0.7	0.0	0.0	0.0	274.0	247.3	146.5	67.2	0.0	31076.8	328.0
2.00	29252.5	0.0	0.9	360.4	20.4	2.3	0.0	0.0	0.0	218.4	295.3	176.9	94.9	0.0	30422.0	740.0
3.00	28507.2	0.0	1.6	361.5	28.8	4.3	0.0	0.0	0.0	278.4	391.3	241.7	132.4	0.0	29947.2	1046.0
4.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
5.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
6.00	27938.0	0.0	1.6	359.2	26.8	4.0	0.0	0.0	0.0	358.3	650.6	373.1	244.2	0.0	29955.8	1046.0
7.00	27938.0	0.0	1.6	359.2	26.8	4.0	0.0	0.0	0.0	358.3	650.6	373.1	244.2	0.0	29955.8	1046.0
8.00	27938.0	0.0	1.6	359.2	26.8	4.0	0.0	0.0	0.0	358.3	650.6	373.1	244.2	0.0	29955.8	1046.0
9.00	27938.0	0.0	1.6	359.2	26.8	4.0	0.0	0.0	0.0	358.3	650.6	373.1	244.2	0.0	29955.8	1046.0
10.00	27938.0	0.0	1.6	359.2	26.8	4.0	0.0	0.0	0.0	358.3	650.6	373.1	244.2	0.0	29955.8	1046.0
11.00	27517.8	0.0	1.6	353.1	25.2	3.7	0.0	0.0	0.0	456.9	813.3	447.4	332.3	0.0	29951.2	1046.0
12.00	27517.8	0.0	1.6	353.1	25.2	3.7	0.0	0.0	0.0	456.9	813.3	447.4	332.3	0.0	29951.2	1046.0
13.00	27517.8	0.0	1.6	353.1	25.2	3.7	0.0	0.0	0.0	456.9	813.3	447.4	332.3	0.0	29951.2	1046.0
14.00	27517.8	0.0	1.6	353.1	25.2	3.7	0.0	0.0	0.0	456.9	813.3	447.4	332.3	0.0	29951.2	1046.0
15.00	27517.8	0.0	1.6	353.1	25.2	3.7	0.0	0.0	0.0	456.9	813.3	447.4	332.3	0.0	29951.2	1046.0
16.00	27200.3	0.0	1.6	347.2	23.9	3.5	0.0	0.0	0.0	516.3	940.6	494.1	402.3	0.0	29929.7	1046.0
17.00	27200.3	0.0	1.6	347.2	23.9	3.5	0.0	0.0	0.0	516.3	940.6	494.1	402.3	0.0	29929.7	1046.0
18.00	27200.3	0.0	1.6	347.2	23.9	3.5	0.0	0.0	0.0	516.3	940.6	494.1	402.3	0.0	29929.7	1046.0
19.00	27200.3	0.0	1.6	347.2	23.9	3.5	0.0	0.0	0.0	516.3	940.6	494.1	402.3	0.0	29929.7	1046.0
20.00	27200.3	0.0	1.6	347.2	23.9	3.5	0.0	0.0	0.0	516.3	940.6	494.1	402.3	0.0	29929.7	1046.0
21.00	26946.4	0.0	1.6	343.0	23.0	3.3	0.0	0.0	0.0	564.1	1045.7	528.1	458.7	0.0	29913.9	1046.0
22.00	26946.4	0.0	1.6	343.0	23.0	3.3	0.0	0.0	0.0	564.1	1045.7	528.1	458.7	0.0	29913.9	1046.0
23.00	26946.4	0.0	1.6	343.0	23.0	3.3	0.0	0.0	0.0	564.1	1045.7	528.1	458.7	0.0	29913.9	1046.0
24.00	26946.4	0.0	1.6	343.0	23.0	3.3	0.0	0.0	0.0	564.1	1045.7	528.1	458.7	0.0	29913.9	1046.0
25.00	26946.4	0.0	1.6	343.0	23.0	3.3	0.0	0.0	0.0	564.1	1045.7	528.1	458.7	0.0	29913.9	1046.0
26.00	26736.3	0.0	1.6	340.5	22.5	3.3	0.0	0.0	0.0	603.4	1145.3	556.6	508.5	0.0	29917.9	1046.0
27.00	26736.3	0.0	1.6	340.5	22.5	3.3	0.0	0.0	0.0	603.4	1145.3	556.6	508.5	0.0	29917.9	1046.0
28.00	26736.3	0.0	1.6	340.5	22.5	3.3	0.0	0.0	0.0	603.4	1145.3	556.6	508.5	0.0	29917.9	1046.0
29.00	26736.3	0.0	1.6	340.5	22.5	3.3	0.0	0.0	0.0	603.4	1145.3	556.6	508.5	0.0	29917.9	1046.0
30.00	26736.3	0.0	1.6	340.5	22.5	3.3	0.0	0.0	0.0	603.4	1145.3	556.6	508.5	0.0	29917.9	1046.0
30.00	26894.6	21.4	0.5	230.4	12.7	1.4	0.0	0.0	5.8	807.8	1229.8	591.1	515.5	0.0	30311.0	719.8
30.00	27052.1	20.4	0.1	122.0	4.8	0.3	0.0	0.0	1.2	1064.3	1312.1	626.0	521.9	0.0	30725.3	375.4

PWR-6
PU(TH)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	87.9	86.7
FINAL CORE	85.7	81.4
ANNUAL EQUILIBRIUM	28.6	28.1
30 YR CUMULATIVE	916.4	899.2
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.3
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.3
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.3
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	2463.8	1051.9
FINAL CORE	3503.2	2863.8
ANNUAL EQUILIBRIUM	1167.7	431.4
30 YR CUMULATIVE	36261.4	15131.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	3486.6	2019.2
FINAL CORE	4955.9	6135.7
ANNUAL EQUILIBRIUM	1652.0	879.4
30 YR CUMULATIVE	51300.8	31019.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	723.6
FINAL CORE	0.0	601.6
ANNUAL EQUILIBRIUM	0.0	291.3
30 YR CUMULATIVE	0.0	8899.4
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	5.8
FINAL CORE	0.0	4.9
ANNUAL EQUILIBRIUM	0.0	3.5
30 YR CUMULATIVE	0.0	102.7

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-6
PU(TH)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	89091.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2552.0	1071.0	577.0	228.0	0.0	93519.0	0.0
1.00	29065.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1141.0	479.0	258.0	102.0	0.0	31045.0	0.0
2.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
3.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
4.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
5.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
6.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
7.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
8.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
9.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
10.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
11.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
12.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
13.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
14.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
15.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
16.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
17.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
18.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
19.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
20.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
21.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
22,00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
23.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
24.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
25.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
26.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
27.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
28.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0
29.00	28948.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1209.0	507.0	274.0	108.0	0.0	31046.0	0.0

PWR-6
PU(TH)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	30134.0	0.0	0.3	197.0	9.8	0.7	0.0	0.0	0.0	274.0	247.3	146.5	67.2	0.0	31076.8	328.0
2.00	29252.5	0.0	0.9	360.4	20.4	2.3	0.0	0.0	0.0	218.4	295.3	176.9	94.9	0.0	30422.0	740.0
3.00	28507.2	0.0	1.6	361.5	28.8	4.3	0.0	0.0	0.0	278.4	391.3	241.7	132.4	0.0	29947.2	1046.0
4.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
5.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
6.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
7.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
8.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
9.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
10.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
11.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
12.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
13.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
14.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
15.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
16.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
17.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
18.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
19.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
20.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
21.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
22.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
23.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
24.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
25.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
26.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
27.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
28.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
29.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
30.00	28497.2	0.0	1.6	370.0	29.9	4.5	0.0	0.0	0.0	289.6	428.9	258.2	140.1	0.0	30020.0	1046.0
30.00	26894.6	21.4	0.5	230.4	12.7	1.4	0.0	0.0	5.8	807.8	1229.8	591.1	515.5	0.0	30311.0	719.8
30.00	27052.1	20.4	0.1	122.0	4.8	0.3	0.0	0.0	1.2	1064.3	1312.1	626.0	521.9	0.0	30725.3	375.4

PWR-7
PU(TH)-RPU,X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	87.2	85.9
FINAL CORE	74.2	71.9
ANNUAL EQUILIBRIUM	14.7	14.7
30 YR CUMULATIVE	528.1	519.6
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	2705.7	858.0
FINAL CORE	6828.3	4691.3
ANNUAL EQUILIBRIUM	1333.4	619.4
30 YR CUMULATIVE	39887.1	18769.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	4023.6	2043.2
FINAL CORE	14155.5	12154.0
ANNUAL EQUILIBRIUM	2624.6	1733.4
30 YR CUMULATIVE	73809.4	49118.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	721.0
FINAL CORE	0.0	654.6
ANNUAL EQUILIBRIUM	0.0	199.1
30 YR CUMULATIVE	0.0	6242.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	7.7
FINAL CORE	0.0	6.4
ANNUAL EQUILIBRIUM	0.0	3.1
30 YR CUMULATIVE	0.0	96.1

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	55515.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-7
PU(TH)-RPU,X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	18416.0	11.6	0.0	71.0	2.1	0.1	0.0	0.0	0.3	65.0	120.2	85.3	46.8	0.0	18818.5	193.8
2.00	17819.4	12.1	0.1	116.8	4.8	0.4	0.0	0.0	2.7	78.2	122.9	100.3	53.6	0.0	18311.3	444.7
3.00	17499.3	12.7	0.3	177.5	10.5	1.3	0.0	0.0	6.5	95.3	154.7	118.2	89.3	0.0	18165.7	669.1
4.00	17019.3	13.4	0.4	215.7	15.6	2.4	0.1	0.0	10.9	101.6	265.2	144.9	105.1	0.0	17894.8	874.8
5.00	16347.6	14.1	0.6	270.6	26.9	5.5	0.3	0.0	14.7	108.1	344.9	192.7	167.2	0.0	17493.5	1047.3
6.00	16091.0	14.1	0.6	253.7	26.1	5.3	0.3	0.0	14.7	240.0	399.1	232.8	170.9	0.0	17448.6	1047.3
7.00	16091.0	14.1	0.6	253.7	26.1	5.3	0.3	0.0	14.7	240.0	399.1	232.8	170.9	0.0	17448.6	1047.3
8.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
9.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
10.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
11.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
12.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
13.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
14.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
15.00	15197.1	12.0	0.4	244.3	21.0	4.2	0.2	0.0	21.6	364.9	805.8	356.9	370.0	0.0	17398.4	1046.9
16.00	15197.1	12.0	0.4	244.3	21.0	4.2	0.2	0.0	21.6	364.9	805.8	356.9	370.0	0.0	17398.4	1046.9
17.00	15197.1	12.0	0.4	244.3	21.0	4.2	0.2	0.0	21.6	364.9	805.8	356.9	370.0	0.0	17398.4	1046.9
18.00	15197.1	12.0	0.4	244.3	21.0	4.2	0.2	0.0	21.6	364.9	805.8	356.9	370.0	0.0	17398.4	1046.9
19.00	15197.1	12.0	0.4	244.3	21.0	4.2	0.2	0.0	21.6	364.9	805.8	356.9	370.0	0.0	17398.4	1046.9
20.00	15197.1	12.0	0.4	244.3	21.0	4.2	0.2	0.0	21.6	364.9	805.8	356.9	370.0	0.0	17398.4	1046.9
21.00	15197.1	12.0	0.4	244.3	21.0	4.2	0.2	0.0	21.6	364.9	805.8	356.9	370.0	0.0	17398.4	1046.9
22.00	14905.3	11.6	0.4	241.2	20.1	4.0	0.2	0.0	22.5	402.4	956.1	384.2	436.2	0.0	17384.2	1046.9
23.00	14905.3	11.6	0.4	241.2	20.1	4.0	0.2	0.0	22.5	402.4	956.1	384.2	436.2	0.0	17384.2	1046.9
24.00	14905.3	11.6	0.4	241.2	20.1	4.0	0.2	0.0	22.5	402.4	956.1	384.2	436.2	0.0	17384.2	1046.9
25.00	14905.3	11.6	0.4	241.2	20.1	4.0	0.2	0.0	22.5	402.4	956.1	384.2	436.2	0.0	17384.2	1046.9
26.00	14905.3	11.6	0.4	241.2	20.1	4.0	0.2	0.0	22.5	402.4	956.1	384.2	436.2	0.0	17384.2	1046.9
27.00	14905.3	11.6	0.4	241.2	20.1	4.0	0.2	0.0	22.5	402.4	956.1	384.2	436.2	0.0	17384.2	1046.9
28.00	14905.3	11.6	0.4	241.2	20.1	4.0	0.2	0.0	22.5	402.4	956.1	384.2	436.2	0.0	17384.2	1046.9
29.00	14646.9	11.5	0.4	238.6	19.7	3.9	0.2	0.0	22.9	432.8	1088.7	410.2	496.2	0.0	17372.0	1047.0
30.00	14646.9	11.5	0.4	238.6	19.7	3.9	0.2	0.0	22.9	432.8	1088.7	410.2	496.2	0.0	17372.0	1047.0
30.00	14441.3	10.9	0.3	206.6	14.5	2.4	0.1	0.0	16.8	559.2	1262.3	450.8	598.6	0.0	17563.7	874.8
30.00	14519.5	10.5	0.2	166.8	9.7	1.3	0.0	0.0	9.9	685.8	1316.3	479.9	612.1	0.0	17812.3	670.8
30.00	14602.5	10.1	0.1	116.4	5.2	0.5	0.0	0.0	4.0	838.6	1367.1	514.9	626.4	0.0	18085.8	444.9
30.00	14691.7	9.8	0.0	50.0	1.5	0.1	0.0	0.0	0.5	1027.3	1414.6	558.6	641.4	0.0	18395.4	193.9

PWR-7
PU(TH)-RPU,X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	88411.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2635.1	1280.8	801.1	392.9	0.0	93520.8	0.0
1.00	16558.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1060.1	515.7	322.6	158.2	0.0	18615.0	0.0
2.00	16558.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1060.1	515.7	322.6	158.2	0.0	18615.0	0.0
3.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
4.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
5.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
6.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
7.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
8.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
9.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
10.00	15279.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1114.0	996.7	520.9	396.9	0.0	18308.4	0.0
11.00	15279.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1114.0	996.7	520.9	396.9	0.0	18308.4	0.0
12.00	15279.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1114.0	996.7	520.9	396.9	0.0	18308.4	0.0
13.00	15279.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1114.0	996.7	520.9	396.9	0.0	18308.4	0.0
14.00	15279.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1114.0	996.7	520.9	396.9	0.0	18308.4	0.0
15.00	15279.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1114.0	996.7	520.9	396.9	0.0	18308.4	0.0
16.00	15279.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1114.0	996.7	520.9	396.9	0.0	18308.4	0.0
17.00	14912.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.4	1164.0	551.0	475.9	0.0	18245.9	0.0
18.00	14912.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.4	1164.0	551.0	475.9	0.0	18245.9	0.0
19.00	14912.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.4	1164.0	551.0	475.9	0.0	18245.9	0.0
20.00	14912.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.4	1164.0	551.0	475.9	0.0	18245.9	0.0
21.00	14912.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.4	1164.0	551.0	475.9	0.0	18245.9	0.0
22.00	14912.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.4	1164.0	551.0	475.9	0.0	18245.9	0.0
23.00	14912.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.4	1164.0	551.0	475.9	0.0	18245.9	0.0
24.00	15040.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1160.5	1316.1	573.9	545.0	0.0	18636.2	0.0
25.00	15040.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1160.5	1316.1	573.9	545.0	0.0	18636.2	0.0
26.00	15040.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1160.5	1316.1	573.9	545.0	0.0	18636.2	0.0
27.00	15040.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1160.5	1316.1	573.9	545.0	0.0	18636.2	0.0
28.00	15040.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1160.5	1316.1	573.9	545.0	0.0	18636.2	0.0
29.00	15040.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1160.5	1316.1	573.9	545.0	0.0	18636.2	0.0

PWR-8
PU(TH)-X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	87.2	85.9
FINAL CORE	79.0	72.8
ANNUAL EQUILIBRIUM	15.8	15.4
30 YR CUMULATIVE	546.3	528.5
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	2705.7	858.0
FINAL CORE	6046.3	4527.3
ANNUAL EQUILIBRIUM	1209.3	499.7
30 YR CUMULATIVE	37533.3	17123.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	4023.6	2043.2
FINAL CORE	10354.1	11454.8
ANNUAL EQUILIBRIUM	2070.8	1230.6
30 YR CUMULATIVE	63174.5	42235.5
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	721.0
FINAL CORE	0.0	663.6
ANNUAL EQUILIBRIUM	0.0	206.0
30 YR CUMULATIVE	0.0	6338.6
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	7.7
FINAL CORE	0.0	7.0
ANNUAL EQUILIBRIUM	0.0	3.7
30 YR CUMULATIVE	0.0	104.1

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	55515.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-8
PU(TH)-X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	88411.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2635.1	1280.8	801.1	392.9	0.0	93520.8	0.0
1.00	16558.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1060.1	515.7	322.6	158.2	0.0	18615.0	0.0
2.00	16558.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1060.1	515.7	322.6	158.2	0.0	18615.0	0.0
3.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
4.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
5.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
6.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
7.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
8.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
9.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
10.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
11.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
12.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
13.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
14.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
15.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
16.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
17.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
18.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
19.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
20.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
21.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
22.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
23.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
24.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
25.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
26.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
27.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
28.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0
29.00	16002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1074.4	800.8	461.4	293.4	0.0	18631.9	0.0

PWR-8
PU(TH)-X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	18416.0	11.6	0.0	71.0	2.1	0.1	0.0	0.0	0.3	65.0	120.2	85.3	46.8	0.0	18818.5	193.8
2.00	17819.4	12.1	0.1	116.8	4.8	0.4	0.0	0.0	2.7	78.2	122.9	100.3	53.6	0.0	18311.3	444.7
3.00	17499.3	12.7	0.3	177.5	10.5	1.3	0.0	0.0	6.5	95.3	154.7	118.2	89.3	0.0	18165.7	669.1
4.00	17019.3	13.4	0.4	215.7	15.6	2.4	0.1	0.0	10.9	101.6	265.2	144.9	105.1	0.0	17894.8	874.8
5.00	16347.6	14.1	0.6	270.6	26.9	5.5	0.3	0.0	14.7	108.1	344.9	192.7	167.2	0.0	17493.5	1047.3
6.00	16091.0	14.1	0.6	253.7	26.1	5.3	0.3	0.0	14.7	240.0	399.1	232.8	170.9	0.0	17448.6	1047.3
7.00	16091.0	14.1	0.6	253.7	26.1	5.3	0.3	0.0	14.7	240.0	399.1	232.8	170.9	0.0	17448.6	1047.3
8.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
9.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
10.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
11.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
12.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
13.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
14.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
15.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
16.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
17.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
18.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
19.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
20.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
21.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
22.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
23.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
24.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
25.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
26.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
27.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
28.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
29.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
30.00	15568.3	12.8	0.5	248.9	23.0	4.7	0.3	0.0	19.5	318.5	623.6	316.1	285.1	0.0	17421.2	1047.0
30.00	14441.3	10.9	0.3	206.6	14.5	2.4	0.1	0.0	16.8	559.2	1262.3	450.8	598.6	0.0	17563.7	874.8
30.00	14519.9	10.5	0.2	166.8	9.7	1.3	0.0	0.0	9.9	685.8	1316.3	479.9	612.1	0.0	17812.3	670.8
30.00	14602.5	10.1	0.1	116.4	5.2	0.5	0.0	0.0	4.0	838.6	1367.1	514.9	626.4	0.0	18085.8	444.9
30.00	14691.7	9.8	0.0	50.0	1.5	0.1	0.0	0.0	0.5	1027.3	1414.6	558.6	641.4	0.0	18395.4	193.9

PWR-9
PU(U)-RPU

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	102.1	36.0
FINAL CORE	96.6	63.4
ANNUAL EQUILIBRIUM	32.3	15.8
30 YR CUMULATIVE	1049.2	490.2
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.8	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	1605.5	1107.1
FINAL CORE	3666.1	3001.6
ANNUAL EQUILIBRIUM	1180.3	878.7
30 YR CUMULATIVE	33738.6	24700.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	2270.9	1846.3
FINAL CORE	6415.7	5560.2
ANNUAL EQUILIBRIUM	2035.4	1652.5
30 YR CUMULATIVE	55946.5	45246.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	559.1	295.3
FINAL CORE	529.1	396.1
ANNUAL EQUILIBRIUM	177.2	111.0
30 YR CUMULATIVE	5742.5	3507.1

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	30400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-9
PU(U)-RPU
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	710.0	0.0	99196.0	0.0	1662.0	697.0	377.0	148.0	0.0	102790.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	232.0	0.0	32425.0	0.0	844.0	354.0	191.0	75.0	0.0	34121.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	233.0	0.0	32451.0	0.0	909.0	381.0	206.0	81.0	0.0	34261.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	230.0	0.0	32072.0	0.0	954.0	557.0	297.0	150.0	0.0	34260.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	230.0	0.0	32072.0	0.0	954.0	557.0	297.0	150.0	0.0	34260.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	230.0	0.0	32072.0	0.0	954.0	557.0	297.0	150.0	0.0	34260.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	230.0	0.0	32072.0	0.0	954.0	557.0	297.0	150.0	0.0	34260.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	230.0	0.0	32072.0	0.0	954.0	557.0	297.0	150.0	0.0	34260.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	229.0	0.0	31794.0	0.0	1012.0	667.0	352.0	209.0	0.0	34263.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	229.0	0.0	31794.0	0.0	1012.0	667.0	352.0	209.0	0.0	34263.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	229.0	0.0	31794.0	0.0	1012.0	667.0	352.0	209.0	0.0	34263.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	229.0	0.0	31794.0	0.0	1012.0	667.0	352.0	209.0	0.0	34263.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	229.0	0.0	31794.0	0.0	1012.0	667.0	352.0	209.0	0.0	34263.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	226.0	0.0	31579.0	0.0	1061.0	740.0	384.0	255.0	0.0	34245.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	226.0	0.0	31579.0	0.0	1061.0	740.0	384.0	255.0	0.0	34245.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	226.0	0.0	31579.0	0.0	1061.0	740.0	384.0	255.0	0.0	34245.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	226.0	0.0	31579.0	0.0	1061.0	740.0	384.0	255.0	0.0	34245.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	226.0	0.0	31579.0	0.0	1061.0	740.0	384.0	255.0	0.0	34245.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	225.0	0.0	31454.0	0.0	1093.0	795.0	406.0	291.0	0.0	34264.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	225.0	0.0	31454.0	0.0	1093.0	795.0	406.0	291.0	0.0	34264.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	225.0	0.0	31454.0	0.0	1093.0	795.0	406.0	291.0	0.0	34264.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	225.0	0.0	31454.0	0.0	1093.0	795.0	406.0	291.0	0.0	34264.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	225.0	0.0	31454.0	0.0	1093.0	795.0	406.0	291.0	0.0	34264.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	224.0	0.0	31326.0	0.0	1128.0	841.0	424.0	323.0	0.0	34266.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	224.0	0.0	31326.0	0.0	1128.0	841.0	424.0	323.0	0.0	34266.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	224.0	0.0	31326.0	0.0	1128.0	841.0	424.0	323.0	0.0	34266.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	224.0	0.0	31326.0	0.0	1128.0	841.0	424.0	323.0	0.0	34266.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	224.0	0.0	31326.0	0.0	1128.0	841.0	424.0	323.0	0.0	34266.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	224.0	0.0	31326.0	0.0	1128.0	841.0	424.0	323.0	0.0	34266.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	224.0	0.0	31326.0	0.0	1128.0	841.0	424.0	323.0	0.0	34266.0	0.0

PWR-9
PU(U)-RPU
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	141.0	19.0	32872.0	0.9	265.0	160.0	93.0	48.0	2.5	33601.4	502.4
2.00	0.0	0.0	0.0	0.0	0.0	117.0	23.0	32364.0	3.1	311.0	223.0	131.0	76.0	4.5	33252.6	837.0
3.00	0.0	0.0	0.0	0.0	0.0	117.0	23.0	31824.0	6.8	421.0	320.0	185.0	101.0	5.9	33003.7	1068.0
4.00	0.0	0.0	0.0	0.0	0.0	124.0	23.0	31806.0	6.8	479.0	350.0	212.0	109.0	5.9	33115.7	1068.0
5.00	0.0	0.0	0.0	0.0	0.0	124.0	23.0	31806.0	6.8	479.0	350.0	212.0	109.0	5.9	33115.7	1068.0
6.00	0.0	0.0	0.0	0.0	0.0	133.0	21.0	31397.0	8.5	586.0	490.0	284.0	171.0	5.8	33096.3	1068.0
7.00	0.0	0.0	0.0	0.0	0.0	133.0	21.0	31397.0	8.5	586.0	490.0	284.0	171.0	5.8	33096.3	1068.0
8.00	0.0	0.0	0.0	0.0	0.0	133.0	21.0	31397.0	8.5	586.0	490.0	284.0	171.0	5.8	33096.3	1068.0
9.00	0.0	0.0	0.0	0.0	0.0	133.0	21.0	31397.0	8.5	586.0	490.0	284.0	171.0	5.8	33096.3	1068.0
10.00	0.0	0.0	0.0	0.0	0.0	133.0	21.0	31397.0	8.5	586.0	490.0	284.0	171.0	5.8	33096.3	1068.0
11.00	0.0	0.0	0.0	0.0	0.0	138.0	20.0	31131.0	8.5	654.0	574.0	327.0	221.0	5.8	33079.3	1068.0
12.00	0.0	0.0	0.0	0.0	0.0	138.0	20.0	31131.0	8.5	654.0	574.0	327.0	221.0	5.8	33079.3	1068.0
13.00	0.0	0.0	0.0	0.0	0.0	138.0	20.0	31131.0	8.5	654.0	574.0	327.0	221.0	5.8	33079.3	1068.0
14.00	0.0	0.0	0.0	0.0	0.0	138.0	20.0	31131.0	8.5	654.0	574.0	327.0	221.0	5.8	33079.3	1068.0
15.00	0.0	0.0	0.0	0.0	0.0	138.0	20.0	31131.0	8.5	654.0	574.0	327.0	221.0	5.8	33079.3	1068.0
16.00	0.0	0.0	0.0	0.0	0.0	140.0	20.0	30926.0	8.5	703.0	635.0	355.0	259.0	5.8	33052.3	1068.0
17.00	0.0	0.0	0.0	0.0	0.0	140.0	20.0	30926.0	8.5	703.0	635.0	355.0	259.0	5.8	33052.3	1068.0
18.00	0.0	0.0	0.0	0.0	0.0	140.0	20.0	30926.0	8.5	703.0	635.0	355.0	259.0	5.8	33052.3	1068.0
19.00	0.0	0.0	0.0	0.0	0.0	140.0	20.0	30926.0	8.5	703.0	635.0	355.0	259.0	5.8	33052.3	1068.0
20.00	0.0	0.0	0.0	0.0	0.0	140.0	20.0	30926.0	8.5	703.0	635.0	355.0	259.0	5.8	33052.3	1068.0
21.00	0.0	0.0	0.0	0.0	0.0	141.0	20.0	30800.0	8.6	740.0	683.0	376.0	291.0	5.8	33065.4	1068.0
22.00	0.0	0.0	0.0	0.0	0.0	141.0	20.0	30800.0	8.6	740.0	683.0	376.0	291.0	5.8	33065.4	1068.0
23.00	0.0	0.0	0.0	0.0	0.0	141.0	20.0	30800.0	8.6	740.0	683.0	376.0	291.0	5.8	33065.4	1068.0
24.00	0.0	0.0	0.0	0.0	0.0	141.0	20.0	30800.0	8.6	740.0	683.0	376.0	291.0	5.8	33065.4	1068.0
25.00	0.0	0.0	0.0	0.0	0.0	141.0	20.0	30800.0	8.6	740.0	683.0	376.0	291.0	5.8	33065.4	1068.0
26.00	0.0	0.0	0.0	0.0	0.0	142.0	19.0	30683.0	8.6	770.0	720.0	391.0	317.0	5.8	33056.4	1068.0
27.00	0.0	0.0	0.0	0.0	0.0	142.0	19.0	30683.0	8.6	770.0	720.0	391.0	317.0	5.8	33056.4	1068.0
28.00	0.0	0.0	0.0	0.0	0.0	142.0	19.0	30683.0	8.6	770.0	720.0	391.0	317.0	5.8	33056.4	1068.0
29.00	0.0	0.0	0.0	0.0	0.0	142.0	19.0	30683.0	8.6	770.0	720.0	391.0	317.0	5.8	33056.4	1068.0
30.00	0.0	0.0	0.0	0.0	0.0	142.0	19.0	30683.0	9.6	770.0	720.0	391.0	317.0	5.8	33056.4	1068.0
30.00	0.0	0.0	0.0	0.0	0.0	167.0	14.0	30790.0	4.0	858.0	763.0	401.0	316.0	3.0	33316.0	713.0
30.00	0.0	0.0	0.0	0.0	0.0	194.0	7.0	31000.0	0.8	979.0	802.0	413.0	318.0	1.0	33714.8	357.0

PWR-10
PU(U)-RPU,X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	101.7	25.9
FINAL CORE	89.9	55.4
ANNUAL EQUILIBRIUM	18.2	7.5
30 YR CUMULATIVE	634.7	244.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	1765.5	1093.2
FINAL CORE	6107.4	4968.3
ANNUAL EQUILIBRIUM	1188.8	780.5
30 YR CUMULATIVE	34577.4	23365.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	2625.9	1966.3
FINAL CORE	11373.2	10206.7
ANNUAL EQUILIBRIUM	2120.4	1622.6
30 YR CUMULATIVE	59691.9	46755.2
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	556.8	254.2
FINAL CORE	492.2	353.8
ANNUAL EQUILIBRIUM	99.5	56.6
30 YR CUMULATIVE	3474.9	1908.6

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50650.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-10
PU(U)-RPU,X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	707.2	0.0	98752.4	0.0	1719.1	836.2	523.1	256.5	0.0	102794.3	0.0
1.00	0.0	0.0	0.0	0.0	0.0	133.4	0.0	18633.0	0.0	879.8	428.0	267.7	131.3	0.0	20473.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	133.4	0.0	18633.0	0.0	879.8	428.0	267.7	131.3	0.0	20473.2	0.0
3.00	0.0	0.0	0.0	0.0	0.0	129.9	0.0	18141.9	0.0	985.5	639.0	356.3	220.2	0.0	20472.7	0.0
4.00	0.0	0.0	0.0	0.0	0.0	129.9	0.0	18141.9	0.0	985.5	639.0	356.3	220.2	0.0	20472.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	129.9	0.0	18141.9	0.0	985.5	639.0	356.3	220.2	0.0	20472.7	0.0
6.00	0.0	0.0	0.0	0.0	0.0	129.9	0.0	18141.9	0.0	985.5	639.0	356.3	220.2	0.0	20472.7	0.0
7.00	0.0	0.0	0.0	0.0	0.0	129.9	0.0	18141.9	0.0	985.5	639.0	356.3	220.2	0.0	20472.7	0.0
8.00	0.0	0.0	0.0	0.0	0.0	129.9	0.0	18141.9	0.0	985.5	639.0	356.3	220.2	0.0	20472.7	0.0
9.00	0.0	0.0	0.0	0.0	0.0	129.9	0.0	18141.9	0.0	985.5	639.0	356.3	220.2	0.0	20472.7	0.0
10.00	0.0	0.0	0.0	0.0	0.0	127.8	0.0	17849.6	0.0	1048.8	771.5	395.1	280.3	0.0	20473.2	0.0
11.00	0.0	0.0	0.0	0.0	0.0	127.8	0.0	17849.6	0.0	1048.8	771.5	395.1	280.3	0.0	20473.2	0.0
12.00	0.0	0.0	0.0	0.0	0.0	127.8	0.0	17849.6	0.0	1048.8	771.5	395.1	280.3	0.0	20473.2	0.0
13.00	0.0	0.0	0.0	0.0	0.0	127.8	0.0	17849.6	0.0	1048.8	771.5	395.1	280.3	0.0	20473.2	0.0
14.00	0.0	0.0	0.0	0.0	0.0	127.8	0.0	17849.6	0.0	1048.8	771.5	395.1	280.3	0.0	20473.2	0.0
15.00	0.0	0.0	0.0	0.0	0.0	127.8	0.0	17849.6	0.0	1048.8	771.5	395.1	280.3	0.0	20473.2	0.0
16.00	0.0	0.0	0.0	0.0	0.0	127.8	0.0	17849.6	0.0	1048.8	771.5	395.1	280.3	0.0	20473.2	0.0
17.00	0.0	0.0	0.0	0.0	0.0	126.4	0.0	17654.5	0.0	1098.6	863.5	411.2	319.6	0.0	20473.8	0.0
18.00	0.0	0.0	0.0	0.0	0.0	126.4	0.0	17654.5	0.0	1098.6	863.5	411.2	319.6	0.0	20473.8	0.0
19.00	0.0	0.0	0.0	0.0	0.0	126.4	0.0	17654.5	0.0	1098.6	863.5	411.2	319.6	0.0	20473.8	0.0
20.00	0.0	0.0	0.0	0.0	0.0	126.4	0.0	17654.5	0.0	1098.6	863.5	411.2	319.6	0.0	20473.8	0.0
21.00	0.0	0.0	0.0	0.0	0.0	126.4	0.0	17654.5	0.0	1098.6	863.5	411.2	319.6	0.0	20473.8	0.0
22.00	0.0	0.0	0.0	0.0	0.0	126.4	0.0	17654.5	0.0	1098.6	863.5	411.2	319.6	0.0	20473.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	126.4	0.0	17654.5	0.0	1098.6	863.5	411.2	319.6	0.0	20473.8	0.0
24.00	0.0	0.0	0.0	0.0	0.0	125.0	0.0	17459.7	0.0	1124.0	976.7	427.3	360.8	0.0	20473.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	125.0	0.0	17459.7	0.0	1124.0	976.7	427.3	360.8	0.0	20473.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	125.0	0.0	17459.7	0.0	1124.0	976.7	427.3	360.8	0.0	20473.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	125.0	0.0	17459.7	0.0	1124.0	976.7	427.3	360.8	0.0	20473.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	125.0	0.0	17459.7	0.0	1124.0	976.7	427.3	360.8	0.0	20473.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	125.0	0.0	17459.7	0.0	1124.0	976.7	427.3	360.8	0.0	20473.5	0.0

PWR-10
PU(U)-RPU,X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	79.5	10.2	19610.7	0.4	86.1	64.5	43.4	27.6	0.8	19923.0	201.4
2.00	0.0	0.0	0.0	0.0	0.0	68.4	14.7	20027.7	2.1	143.1	105.6	70.1	44.7	1.7	20478.1	418.7
3.00	0.0	0.0	0.0	0.0	0.0	51.1	16.7	19273.2	5.7	128.6	124.2	87.6	65.2	2.9	19755.2	698.9
4.00	0.0	0.0	0.0	0.0	0.0	58.4	15.9	18953.7	9.9	190.9	181.8	103.2	63.9	3.9	19581.5	858.2
5.00	0.0	0.0	0.0	0.0	0.0	65.4	15.6	18406.9	14.3	254.8	286.6	280.6	112.5	4.9	19441.7	1058.3
6.00	0.0	0.0	0.0	0.0	0.0	62.6	15.6	18020.2	14.3	458.0	384.8	218.5	142.6	5.0	19321.7	1052.5
7.00	0.0	0.0	0.0	0.0	0.0	62.6	15.6	18020.2	14.3	458.0	384.8	218.5	142.6	5.0	19321.7	1052.5
8.00	0.0	0.0	0.0	0.0	0.0	66.3	14.6	17557.7	17.1	577.7	554.2	283.3	215.7	4.8	19291.3	1052.7
9.00	0.0	0.0	0.0	0.0	0.0	66.3	14.6	17557.7	17.1	577.7	554.2	283.3	215.7	4.8	19291.3	1052.7
10.00	0.0	0.0	0.0	0.0	0.0	66.3	14.6	17557.7	17.1	577.7	554.2	283.3	215.7	4.8	19291.3	1052.7
11.00	0.0	0.0	0.0	0.0	0.0	66.3	14.6	17557.7	17.1	577.7	554.2	283.3	215.7	4.8	19291.3	1052.7
12.00	0.0	0.0	0.0	0.0	0.0	66.3	14.6	17557.7	17.1	577.7	554.2	283.3	215.7	4.8	19291.3	1052.7
13.00	0.0	0.0	0.0	0.0	0.0	66.3	14.6	17557.7	17.1	577.7	554.2	283.3	215.7	4.8	19291.3	1052.7
14.00	0.0	0.0	0.0	0.0	0.0	66.3	14.6	17557.7	17.1	577.7	554.2	283.3	215.7	4.8	19291.3	1052.7
15.00	0.0	0.0	0.0	0.0	0.0	70.0	13.8	17289.9	18.7	632.7	670.8	308.9	262.9	4.6	19272.5	1052.8
16.00	0.0	0.0	0.0	0.0	0.0	70.0	13.8	17289.9	18.7	632.7	670.8	308.9	262.9	4.6	19272.5	1052.8
17.00	0.0	0.0	0.0	0.0	0.0	70.0	13.8	17289.9	18.7	632.7	670.8	308.9	262.9	4.6	19272.5	1052.8
18.00	0.0	0.0	0.0	0.0	0.0	70.0	13.8	17289.9	18.7	632.7	670.8	308.9	262.9	4.6	19272.5	1052.8
19.00	0.0	0.0	0.0	0.0	0.0	70.0	13.8	17289.9	18.7	632.7	670.8	308.9	262.9	4.6	19272.5	1052.8
20.00	0.0	0.0	0.0	0.0	0.0	70.0	13.8	17289.9	18.7	632.7	670.8	308.9	262.9	4.6	19272.5	1052.8
21.00	0.0	0.0	0.0	0.0	0.0	70.0	13.8	17289.9	18.7	632.7	670.8	308.9	262.9	4.6	19272.5	1052.8
22.00	0.0	0.0	0.0	0.0	0.0	71.8	13.4	17111.1	19.4	670.2	756.6	321.0	293.4	4.5	19261.5	1052.9
23.00	0.0	0.0	0.0	0.0	0.0	71.8	13.4	17111.1	19.4	670.2	756.6	321.0	293.4	4.5	19261.5	1052.9
24.00	0.0	0.0	0.0	0.0	0.0	71.8	13.4	17111.1	19.4	670.2	756.6	321.0	293.4	4.5	19261.5	1052.9
25.00	0.0	0.0	0.0	0.0	0.0	71.8	13.4	17111.1	19.4	670.2	756.6	321.0	293.4	4.5	19261.5	1052.9
26.00	0.0	0.0	0.0	0.0	0.0	71.8	13.4	17111.1	19.4	670.2	756.6	321.0	293.4	4.5	19261.5	1052.9
27.00	0.0	0.0	0.0	0.0	0.0	71.8	13.4	17111.1	19.4	670.2	756.6	321.0	293.4	4.5	19261.5	1052.9
28.00	0.0	0.0	0.0	0.0	0.0	71.8	13.4	17111.1	19.4	670.2	756.6	321.0	293.4	4.5	19261.5	1052.9
29.00	0.0	0.0	0.0	0.0	0.0	69.2	13.4	16906.6	19.2	715.3	847.3	350.7	330.9	4.5	19257.3	1053.0
30.00	0.0	0.0	0.0	0.0	0.0	69.2	13.4	16906.6	19.2	715.3	847.3	350.7	330.9	4.5	19257.3	1053.0
30.00	0.0	0.0	0.0	0.0	0.0	78.1	11.9	17046.0	14.4	789.8	938.7	371.6	361.8	3.8	19616.0	888.1
30.00	0.0	0.0	0.0	0.0	0.0	88.2	9.7	17159.2	8.4	862.9	969.6	386.2	369.1	2.8	19856.0	680.1
30.00	0.0	0.0	0.0	0.0	0.0	99.9	6.9	17278.3	3.4	949.7	999.5	403.5	376.8	1.8	20119.8	452.6
30.00	0.0	0.0	0.0	0.0	0.0	113.9	3.2	17406.2	0.4	1055.1	1028.2	424.9	385.1	0.7	20417.6	197.6

PWR-11
MEU3(U,TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	72.6	71.2
FINAL CORE	65.3	64.1
ANNUAL EQUILIBRIUM	22.2	21.6
30 YR CUMULATIVE	718.4	700.9
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	139.4
FINAL CORE	0.0	172.4
ANNUAL EQUILIBRIUM	0.0	66.9
30 YR CUMULATIVE	0.0	2031.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	182.7
FINAL CORE	0.0	219.3
ANNUAL EQUILIBRIUM	0.0	89.0
30 YR CUMULATIVE	0.0	2699.6
URANIUM-233 (KG/GWE)		
INITIAL CORE	1885.0	1269.3
FINAL CORE	2315.0	1625.0
ANNUAL EQUILIBRIUM	769.3	465.4
30 YR CUMULATIVE	24159.9	14829.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	27.6	33.1
FINAL CORE	165.4	172.8
ANNUAL EQUILIBRIUM	48.0	54.3
30 YR CUMULATIVE	1104.7	1350.0

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-11
MEU3(U,TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	73602.0	0.0	3.7	2394.0	0.0	35.0	0.0	17527.0	0.0	0.0	0.0	0.0	0.0	0.0	93561.7	0.0
1.00	23214.0	0.0	1.7	957.0	0.0	14.0	0.0	7007.0	0.0	0.0	0.0	0.0	0.0	0.0	31193.7	0.0
2.00	23214.0	0.0	1.7	957.0	0.0	14.0	0.0	7007.0	0.0	0.0	0.0	0.0	0.0	0.0	31193.7	0.0
3.00	22891.0	0.0	2.7	973.0	96.0	21.0	3.0	7185.0	0.0	0.0	0.0	0.0	0.0	0.0	31171.7	0.0
4.00	22891.0	0.0	2.7	973.0	96.0	21.0	3.0	7185.0	0.0	0.0	0.0	0.0	0.0	0.0	31171.7	0.0
5.00	22891.0	0.0	2.7	973.0	96.0	21.0	3.0	7185.0	0.0	0.0	0.0	0.0	0.0	0.0	31171.7	0.0
6.00	22891.0	0.0	2.7	973.0	96.0	21.0	3.0	7185.0	0.0	0.0	0.0	0.0	0.0	0.0	31171.7	0.0
7.00	22891.0	0.0	2.7	973.0	96.0	21.0	3.0	7185.0	0.0	0.0	0.0	0.0	0.0	0.0	31171.7	0.0
8.00	22745.0	0.0	3.2	975.0	161.0	37.0	9.0	7255.0	0.0	0.0	0.0	0.0	0.0	0.0	31185.2	0.0
9.00	22745.0	0.0	3.2	975.0	161.0	37.0	9.0	7255.0	0.0	0.0	0.0	0.0	0.0	0.0	31185.2	0.0
10.00	22745.0	0.0	3.2	975.0	161.0	37.0	9.0	7255.0	0.0	0.0	0.0	0.0	0.0	0.0	31185.2	0.0
11.00	22745.0	0.0	3.2	975.0	161.0	37.0	9.0	7255.0	0.0	0.0	0.0	0.0	0.0	0.0	31185.2	0.0
12.00	22745.0	0.0	3.2	975.0	161.0	37.0	9.0	7255.0	0.0	0.0	0.0	0.0	0.0	0.0	31185.2	0.0
13.00	22604.0	0.0	3.5	978.0	208.0	51.0	15.0	7323.0	0.0	0.0	0.0	0.0	0.0	0.0	31182.5	0.0
14.00	22604.0	0.0	3.5	978.0	208.0	51.0	15.0	7323.0	0.0	0.0	0.0	0.0	0.0	0.0	31182.5	0.0
15.00	22604.0	0.0	3.5	978.0	208.0	51.0	15.0	7323.0	0.0	0.0	0.0	0.0	0.0	0.0	31182.5	0.0
16.00	22604.0	0.0	3.5	978.0	208.0	51.0	15.0	7323.0	0.0	0.0	0.0	0.0	0.0	0.0	31182.5	0.0
17.00	22604.0	0.0	3.5	978.0	208.0	51.0	15.0	7323.0	0.0	0.0	0.0	0.0	0.0	0.0	31182.5	0.0
18.00	22505.0	0.0	3.6	977.0	242.0	61.0	24.0	7346.0	0.0	0.0	0.0	0.0	0.0	0.0	31158.6	0.0
19.00	22505.0	0.0	3.6	977.0	242.0	61.0	24.0	7346.0	0.0	0.0	0.0	0.0	0.0	0.0	31158.6	0.0
20.00	22505.0	0.0	3.6	977.0	242.0	61.0	24.0	7346.0	0.0	0.0	0.0	0.0	0.0	0.0	31158.6	0.0
21.00	22505.0	0.0	3.6	977.0	242.0	61.0	24.0	7346.0	0.0	0.0	0.0	0.0	0.0	0.0	31158.6	0.0
22.00	22505.0	0.0	3.6	977.0	242.0	61.0	24.0	7346.0	0.0	0.0	0.0	0.0	0.0	0.0	31158.6	0.0
23.00	22045.0	0.0	3.7	980.0	268.0	70.0	33.0	7784.0	0.0	0.0	0.0	0.0	0.0	0.0	31183.7	0.0
24.00	22045.0	0.0	3.7	980.0	268.0	70.0	33.0	7784.0	0.0	0.0	0.0	0.0	0.0	0.0	31183.7	0.0
25.00	22045.0	0.0	3.7	980.0	268.0	70.0	33.0	7784.0	0.0	0.0	0.0	0.0	0.0	0.0	31183.7	0.0
26.00	22045.0	0.0	3.7	980.0	268.0	70.0	33.0	7784.0	0.0	0.0	0.0	0.0	0.0	0.0	31183.7	0.0
27.00	22045.0	0.0	3.7	980.0	268.0	70.0	33.0	7784.0	0.0	0.0	0.0	0.0	0.0	0.0	31183.7	0.0
28.00	22045.0	0.0	3.7	980.0	268.0	70.0	33.0	7784.0	0.0	0.0	0.0	0.0	0.0	0.0	31183.7	0.0
29.00	22045.0	0.0	3.7	980.0	268.0	70.0	33.0	7784.0	0.0	0.0	0.0	0.0	0.0	0.0	31183.7	0.0

PWR-11
MEU3(U,TH)-RUP
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	25705.0	0.0	0.9	537.0	52.0	9.0	1.0	4375.0	0.0	34.0	11.0	6.0	1.0	0.0	30731.9	328.0
2.00	23908.0	0.0	2.0	517.0	60.0	14.0	2.0	5900.0	0.0	49.0	14.0	9.0	2.0	0.0	30477.0	740.0
3.00	22592.0	0.0	2.2	558.0	95.0	19.0	3.0	6733.0	0.0	61.0	21.0	18.0	6.0	0.0	30108.2	1058.0
4.00	22592.0	0.0	2.2	558.0	95.0	19.0	3.0	6733.0	0.0	61.0	21.0	18.0	6.0	0.0	30108.2	1058.0
5.00	22592.0	0.0	2.2	558.0	95.0	19.0	3.0	6733.0	0.0	61.0	21.0	18.0	6.0	0.0	30108.2	1058.0
6.00	22292.0	0.0	2.7	571.0	164.0	37.0	9.0	6911.0	0.0	64.0	22.0	18.0	6.0	0.0	30096.7	1058.0
7.00	22292.0	0.0	2.7	571.0	164.0	37.0	9.0	6911.0	0.0	64.0	22.0	18.0	6.0	0.0	30096.7	1058.0
8.00	22292.0	0.0	2.7	571.0	164.0	37.0	9.0	6911.0	0.0	64.0	22.0	18.0	6.0	0.0	30096.7	1058.0
9.00	22292.0	0.0	2.7	571.0	164.0	37.0	9.0	6911.0	0.0	64.0	22.0	18.0	6.0	0.0	30096.7	1058.0
10.00	22292.0	0.0	2.7	571.0	164.0	37.0	9.0	6911.0	0.0	64.0	22.0	18.0	6.0	0.0	30096.7	1058.0
11.00	22158.0	0.0	2.9	579.0	211.0	56.0	16.0	6981.0	0.0	65.0	22.0	18.0	6.0	0.0	30114.9	1058.0
12.00	22158.0	0.0	2.9	579.0	211.0	56.0	16.0	6981.0	0.0	65.0	22.0	18.0	6.0	0.0	30114.9	1058.0
13.00	22158.0	0.0	2.9	579.0	211.0	56.0	16.0	6981.0	0.0	65.0	22.0	18.0	6.0	0.0	30114.9	1058.0
14.00	22158.0	0.0	2.9	579.0	211.0	56.0	16.0	6981.0	0.0	65.0	22.0	18.0	6.0	0.0	30114.9	1058.0
15.00	22158.0	0.0	2.9	579.0	211.0	56.0	16.0	6981.0	0.0	65.0	22.0	18.0	6.0	0.0	30114.9	1058.0
16.00	22019.0	0.0	3.0	592.0	246.0	61.0	25.0	7051.0	0.0	66.0	22.0	18.0	6.0	0.0	30109.0	1058.0
17.00	22019.0	0.0	3.0	592.0	246.0	61.0	25.0	7051.0	0.0	66.0	22.0	18.0	6.0	0.0	30109.0	1058.0
18.00	22019.0	0.0	3.0	592.0	246.0	61.0	25.0	7051.0	0.0	66.0	22.0	18.0	6.0	0.0	30109.0	1058.0
19.00	22019.0	0.0	3.0	592.0	246.0	61.0	25.0	7051.0	0.0	66.0	22.0	18.0	6.0	0.0	30109.0	1058.0
20.00	22019.0	0.0	3.0	592.0	246.0	61.0	25.0	7051.0	0.0	66.0	22.0	18.0	6.0	0.0	30109.0	1058.0
21.00	21930.0	0.0	3.1	591.0	272.0	69.0	33.0	7073.0	0.0	67.0	22.0	18.0	6.0	0.0	30084.1	1058.0
22.00	21930.0	0.0	3.1	591.0	272.0	69.0	33.0	7073.0	0.0	67.0	22.0	18.0	6.0	0.0	30084.1	1058.0
23.00	21930.0	0.0	3.1	591.0	272.0	69.0	33.0	7073.0	0.0	67.0	22.0	18.0	6.0	0.0	30084.1	1058.0
24.00	21930.0	0.0	3.1	591.0	272.0	69.0	33.0	7073.0	0.0	67.0	22.0	18.0	6.0	0.0	30084.1	1058.0
25.00	21930.0	0.0	3.1	591.0	272.0	69.0	33.0	7073.0	0.0	67.0	22.0	18.0	6.0	0.0	30084.1	1058.0
26.00	21481.0	0.0	3.2	594.0	291.0	75.0	41.0	7504.0	0.0	70.0	23.0	19.0	7.0	0.0	30108.2	1058.0
27.00	21481.0	0.0	3.2	594.0	291.0	75.0	41.0	7504.0	0.0	70.0	23.0	19.0	7.0	0.0	30108.2	1058.0
28.00	21481.0	0.0	3.2	594.0	291.0	75.0	41.0	7504.0	0.0	70.0	23.0	19.0	7.0	0.0	30108.2	1058.0
29.00	21481.0	0.0	3.2	594.0	291.0	75.0	41.0	7504.0	0.0	70.0	23.0	19.0	7.0	0.0	30108.2	1058.0
30.00	21481.0	0.0	3.2	594.0	291.0	75.0	41.0	7504.0	0.0	70.0	23.0	19.0	7.0	0.0	30108.2	1058.0
30.00	21670.2	26.2	11.3	648.0	289.2	73.2	38.6	7599.1	0.9	64.6	17.4	12.0	2.2	4.4	30457.4	729.8
30.00	21856.3	24.4	10.9	771.2	282.6	71.3	35.7	7691.4	0.3	49.5	8.5	3.8	0.3	2.3	30808.4	381.1

PWR-12
MEU3(U,TH)-RUF,X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	72.6	71.2
FINAL CORE	57.8	56.4
ANNUAL EQUILIBRIUM	11.7	11.2
30 YR CUMULATIVE	416.0	402.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	164.6
FINAL CORE	0.0	230.8
ANNUAL EQUILIBRIUM	0.0	54.8
30 YR CUMULATIVE	0.0	1661.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	220.4
FINAL CORE	0.0	305.2
ANNUAL EQUILIBRIUM	0.0	79.1
30 YR CUMULATIVE	0.0	2353.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	1885.7	665.1
FINAL CORE	2973.6	1810.3
ANNUAL EQUILIBRIUM	593.5	257.7
30 YR CUMULATIVE	19075.6	8561.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	37.7	52.6
FINAL CORE	307.2	319.3
ANNUAL EQUILIBRIUM	53.0	54.9
30 YR CUMULATIVE	1343.2	1476.8

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	55515.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-12
MEU3(U,TH)-RUF,X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	73581.1	0.0	5.7	2394.8	233.2	47.9	2.9	17272.1	0.0	0.0	0.0	0.0	0.0	0.0	93537.5	0.0
1.00	12334.7	0.0	1.5	744.0	72.4	25.8	0.9	5460.2	0.0	0.0	0.0	0.0	0.0	0.0	18639.5	0.0
2.00	12334.7	0.0	1.5	744.0	72.4	25.8	0.9	5460.2	0.0	0.0	0.0	0.0	0.0	0.0	18639.5	0.0
3.00	12277.6	0.0	2.5	750.6	165.1	41.8	9.9	5391.6	0.0	0.0	0.0	0.0	0.0	0.0	18639.1	0.0
4.00	12277.6	0.0	2.5	750.6	165.1	41.8	9.9	5391.6	0.0	0.0	0.0	0.0	0.0	0.0	18639.1	0.0
5.00	12277.6	0.0	2.5	750.6	165.1	41.8	9.9	5391.6	0.0	0.0	0.0	0.0	0.0	0.0	18639.1	0.0
6.00	12277.6	0.0	2.5	750.6	165.1	41.8	9.9	5391.6	0.0	0.0	0.0	0.0	0.0	0.0	18639.1	0.0
7.00	12277.6	0.0	2.5	750.6	165.1	41.8	9.9	5391.6	0.0	0.0	0.0	0.0	0.0	0.0	18639.1	0.0
8.00	12277.6	0.0	2.5	750.6	165.1	41.8	9.9	5391.6	0.0	0.0	0.0	0.0	0.0	0.0	18639.1	0.0
9.00	12277.6	0.0	2.5	750.6	165.1	41.8	9.9	5391.6	0.0	0.0	0.0	0.0	0.0	0.0	18639.1	0.0
10.00	12022.4	0.0	2.7	754.4	223.9	53.5	20.7	5557.2	0.0	0.0	0.0	0.0	0.0	0.0	18634.9	0.0
11.00	12022.4	0.0	2.7	754.4	223.9	53.5	20.7	5557.2	0.0	0.0	0.0	0.0	0.0	0.0	18634.9	0.0
12.00	12022.4	0.0	2.7	754.4	223.9	53.5	20.7	5557.2	0.0	0.0	0.0	0.0	0.0	0.0	18634.9	0.0
13.00	12022.4	0.0	2.7	754.4	223.9	53.5	20.7	5557.2	0.0	0.0	0.0	0.0	0.0	0.0	18634.9	0.0
14.00	12022.4	0.0	2.7	754.4	223.9	53.5	20.7	5557.2	0.0	0.0	0.0	0.0	0.0	0.0	18634.9	0.0
15.00	12022.4	0.0	2.7	754.4	223.9	53.5	20.7	5557.2	0.0	0.0	0.0	0.0	0.0	0.0	18634.9	0.0
16.00	12022.4	0.0	2.7	754.4	223.9	53.5	20.7	5557.2	0.0	0.0	0.0	0.0	0.0	0.0	18634.9	0.0
17.00	11847.4	0.0	2.7	753.8	262.5	67.3	31.4	5679.9	0.0	0.0	0.0	0.0	0.0	0.0	18644.9	0.0
18.00	11847.4	0.0	2.7	753.8	262.5	67.3	31.4	5679.9	0.0	0.0	0.0	0.0	0.0	0.0	18644.9	0.0
19.00	11847.4	0.0	2.7	753.8	262.5	67.3	31.4	5679.9	0.0	0.0	0.0	0.0	0.0	0.0	18644.9	0.0
20.00	11847.4	0.0	2.7	753.8	262.5	67.3	31.4	5679.9	0.0	0.0	0.0	0.0	0.0	0.0	18644.9	0.0
21.00	11847.4	0.0	2.7	753.8	262.5	67.3	31.4	5679.9	0.0	0.0	0.0	0.0	0.0	0.0	18644.9	0.0
22.00	11847.4	0.0	2.7	753.8	262.5	67.3	31.4	5679.9	0.0	0.0	0.0	0.0	0.0	0.0	18644.9	0.0
23.00	11847.4	0.0	2.7	753.8	262.5	67.3	31.4	5679.9	0.0	0.0	0.0	0.0	0.0	0.0	18644.9	0.0
24.00	11711.2	0.0	2.7	755.3	289.2	78.0	42.2	5762.1	0.0	0.0	0.0	0.0	0.0	0.0	18640.7	0.0
25.00	11711.2	0.0	2.7	755.3	289.2	78.0	42.2	5762.1	0.0	0.0	0.0	0.0	0.0	0.0	18640.7	0.0
26.00	11711.2	0.0	2.7	755.3	289.2	78.0	42.2	5762.1	0.0	0.0	0.0	0.0	0.0	0.0	18640.7	0.0
27.00	11711.2	0.0	2.7	755.3	289.2	78.0	42.2	5762.1	0.0	0.0	0.0	0.0	0.0	0.0	18640.7	0.0
28.00	11711.2	0.0	2.7	755.3	289.2	78.0	42.2	5762.1	0.0	0.0	0.0	0.0	0.0	0.0	18640.7	0.0
29.00	11711.2	0.0	2.7	755.3	289.2	78.0	42.2	5762.1	0.0	0.0	0.0	0.0	0.0	0.0	18640.7	0.0

PWR-12
MEU3(U,TH)-RUF,X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	16290.9	11.8	0.9	142.8	43.2	5.9	1.7	1975.2	0.0	15.3	1.8	0.7	0.0	0.3	18490.5	212.3
2.00	15464.8	12.8	0.9	107.8	67.3	9.3	3.6	2528.9	0.1	25.4	6.0	4.1	0.6	0.7	18232.3	441.1
3.00	14282.5	14.0	1.3	137.1	89.9	13.8	5.6	3395.0	0.3	40.2	12.7	10.1	2.6	1.1	18006.3	662.8
4.00	13521.8	15.1	1.4	163.9	103.8	17.2	7.5	3898.1	0.7	41.1	15.4	13.1	5.0	1.5	17805.7	867.3
5.00	12551.5	17.0	1.4	222.4	117.4	20.6	9.3	4602.8	1.1	44.2	17.0	14.8	7.4	1.9	17628.8	1038.1
6.00	11841.9	16.1	1.4	286.7	123.6	32.8	9.4	5161.2	1.1	46.2	18.9	16.5	8.2	1.9	17565.9	1082.7
7.00	11841.9	16.1	1.4	286.7	123.6	32.8	9.4	5161.2	1.1	46.2	18.9	16.5	8.2	1.9	17565.9	1082.7
8.00	11797.6	15.5	1.8	303.0	184.3	49.8	20.6	5100.0	1.9	47.8	18.9	16.8	7.8	4.0	17569.8	1077.7
9.00	11797.6	15.5	1.8	303.0	184.3	49.8	20.6	5100.0	1.9	47.8	18.9	16.8	7.8	4.0	17569.8	1077.7
10.00	11797.6	15.5	1.8	303.0	184.3	49.8	20.6	5100.0	1.9	47.8	18.9	16.8	7.8	4.0	17569.8	1077.7
11.00	11797.6	15.5	1.8	303.0	184.3	49.8	20.6	5100.0	1.9	47.8	18.9	16.8	7.8	4.0	17569.8	1077.7
12.00	11797.6	15.5	1.8	303.0	184.3	49.8	20.6	5100.0	1.9	47.8	18.9	16.8	7.8	4.0	17569.8	1077.7
13.00	11797.6	15.5	1.8	303.0	184.3	49.8	20.6	5100.0	1.9	47.8	18.9	16.8	7.8	4.0	17569.8	1077.7
14.00	11797.6	15.5	1.8	303.0	184.3	49.8	20.6	5100.0	1.9	47.8	18.9	16.8	7.8	4.0	17569.8	1077.7
15.00	11557.6	14.6	1.9	310.2	224.7	60.8	31.5	5263.4	2.8	50.1	19.4	17.3	7.7	6.0	17568.0	1074.2
16.00	11557.6	14.6	1.9	310.2	224.7	60.8	31.5	5263.4	2.8	50.1	19.4	17.3	7.7	6.0	17568.0	1074.2
17.00	11557.6	14.6	1.9	310.2	224.7	60.8	31.5	5263.4	2.8	50.1	19.4	17.3	7.7	6.0	17568.0	1074.2
18.00	11557.6	14.6	1.9	310.2	224.7	60.8	31.5	5263.4	2.8	50.1	19.4	17.3	7.7	6.0	17568.0	1074.2
19.00	11557.6	14.6	1.9	310.2	224.7	60.8	31.5	5263.4	2.8	50.1	19.4	17.3	7.7	6.0	17568.0	1074.2
20.00	11557.6	14.6	1.9	310.2	224.7	60.8	31.5	5263.4	2.8	50.1	19.4	17.3	7.7	6.0	17568.0	1074.2
21.00	11557.6	14.6	1.9	310.2	224.7	60.8	31.5	5263.4	2.8	50.1	19.4	17.3	7.7	6.0	17568.0	1074.2
22.00	11395.6	14.5	1.9	312.7	251.8	69.7	42.5	5377.4	3.5	51.9	19.8	17.7	7.5	7.9	17574.4	1072.2
23.00	11395.6	14.5	1.9	312.7	251.8	69.7	42.5	5377.4	3.5	51.9	19.8	17.7	7.5	7.9	17574.4	1072.2
24.00	11395.6	14.5	1.9	312.7	251.8	69.7	42.5	5377.4	3.5	51.9	19.8	17.7	7.5	7.9	17574.4	1072.2
25.00	11395.6	14.5	1.9	312.7	251.8	69.7	42.5	5377.4	3.5	51.9	19.8	17.7	7.5	7.9	17574.4	1072.2
26.00	11395.6	14.5	1.9	312.7	251.8	69.7	42.5	5377.4	3.5	51.9	19.8	17.7	7.5	7.9	17574.4	1072.2
27.00	11395.6	14.5	1.9	312.7	251.8	69.7	42.5	5377.4	3.5	51.9	19.8	17.7	7.5	7.9	17574.4	1072.2
28.00	11395.6	14.5	1.9	312.7	251.8	69.7	42.5	5377.4	3.5	51.9	19.8	17.7	7.5	7.9	17574.4	1072.2
29.00	11267.2	14.1	1.9	316.0	271.0	75.5	52.5	5465.3	4.2	53.2	20.1	17.9	7.5	9.5	17576.0	1070.8
30.00	11267.2	14.1	1.9	316.0	271.0	75.5	52.5	5465.3	4.2	53.2	20.1	17.9	7.5	9.5	17576.0	1070.8
30.00	11326.8	13.4	1.9	361.5	293.2	81.2	60.0	5506.3	3.5	54.1	18.4	16.0	5.1	9.5	17750.8	895.3
30.00	11420.2	12.6	2.0	421.9	300.0	82.3	58.2	5568.0	2.1	53.0	15.2	12.2	2.7	7.6	17958.0	686.5
30.00	11515.6	11.7	2.1	507.2	307.4	83.0	56.2	5631.6	0.9	47.9	10.3	6.9	0.9	5.3	18187.0	457.6
30.00	11614.8	10.9	2.4	629.7	310.3	83.4	54.0	5698.3	0.2	30.6	3.4	1.3	0.1	2.3	18441.8	200.3

PWR-13
MEU5(U,TH)-RUF PART 1 (MAKEUP)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	76.0	74.5
FINAL CORE	5.7	5.6
ANNUAL EQUILIBRIUM	1.9	1.8
30 YR CUMULATIVE	191.3	187.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	653.6	277.6
FINAL CORE	64.5	32.7
ANNUAL EQUILIBRIUM	21.2	7.2
30 YR CUMULATIVE	1961.5	729.6
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	594.2	231.5
FINAL CORE	58.7	27.9
ANNUAL EQUILIBRIUM	19.3	5.8
30 YR CUMULATIVE	1783.2	597.6
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	134.7
FINAL CORE	0.0	11.7
ANNUAL EQUILIBRIUM	0.0	4.6
30 YR CUMULATIVE	0.0	415.3
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	170.5
FINAL CORE	0.0	14.7
ANNUAL EQUILIBRIUM	0.0	6.1
30 YR CUMULATIVE	0.0	540.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	641.3
FINAL CORE	0.0	48.8
ANNUAL EQUILIBRIUM	0.0	21.0
30 YR CUMULATIVE	0.0	1918.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	2597.6	1115.3
FINAL CORE	256.5	131.0
ANNUAL EQUILIBRIUM	84.4	28.9
30 YR CUMULATIVE	7795.8	2938.6

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-13
MEU5(U,TH)-RUF PART 1 (MAKEUP)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	26776.3	37.6	0.3	163.3	10.5	502.8	56.4	3255.4	0.1	28.6	5.8	3.2	0.3	2.1	30842.8	328.6
2.00	25053.8	27.6	0.9	244.3	19.6	442.9	127.9	4424.2	1.1	53.9	13.4	10.6	1.9	2.8	30425.0	739.3
3.00	23709.8	29.4	1.6	312.3	34.6	470.7	161.5	5268.9	2.9	58.3	17.6	16.5	2.1	3.1	30089.4	1072.3
4.00	23709.8	29.4	1.6	312.3	34.6	470.7	161.5	5268.9	2.9	58.3	17.6	16.5	2.1	3.1	30089.4	1072.3
5.00	23709.8	29.4	1.6	312.3	34.6	470.7	161.5	5268.9	2.9	58.3	17.6	16.5	2.1	3.1	30089.4	1072.3
6.00	10165.0	12.6	0.8	133.9	14.8	201.8	67.6	2258.9	1.2	25.0	7.5	7.1	2.0	1.3	12899.6	458.7
7.00	4907.8	6.1	0.4	64.6	7.2	97.4	33.4	1090.6	0.6	12.1	3.6	3.4	1.0	0.6	6228.8	221.9
8.00	2252.4	2.8	0.1	29.7	3.3	44.7	15.3	500.5	0.3	5.5	1.7	1.6	0.4	0.3	2858.7	101.9
9.00	2252.4	2.8	0.1	29.7	3.3	44.7	15.3	500.5	0.3	5.5	1.7	1.6	0.4	0.3	2858.7	101.9
10.00	2252.4	2.8	0.1	29.7	3.3	44.7	15.3	500.5	0.3	5.5	1.7	1.6	0.4	0.3	2858.7	101.9
11.00	2347.3	2.9	0.2	30.9	3.4	46.6	16.0	521.6	0.3	5.8	1.7	1.6	0.5	0.3	2979.1	106.2
12.00	2347.3	2.9	0.2	30.9	3.4	46.6	16.0	521.6	0.3	5.8	1.7	1.6	0.5	0.3	2979.1	106.2
13.00	2347.3	2.9	0.2	30.9	3.4	46.6	16.0	521.6	0.3	5.8	1.7	1.6	0.5	0.3	2979.1	106.2
14.00	2347.3	2.9	0.2	30.9	3.4	46.6	16.0	521.6	0.3	5.8	1.7	1.6	0.5	0.3	2979.1	106.2
15.00	2347.3	2.9	0.2	30.9	3.4	46.6	16.0	521.6	0.3	5.8	1.7	1.6	0.5	0.3	2979.1	106.2
16.00	2110.2	2.6	0.1	27.8	3.1	41.9	14.4	468.9	0.3	5.2	1.6	1.5	0.4	0.3	2678.2	95.4
17.00	2110.2	2.6	0.1	27.8	3.1	41.9	14.4	468.9	0.3	5.2	1.6	1.5	0.4	0.3	2678.2	95.4
18.00	2110.2	2.6	0.1	27.8	3.1	41.9	14.4	468.9	0.3	5.2	1.6	1.5	0.4	0.3	2678.2	95.4
19.00	2110.2	2.6	0.1	27.8	3.1	41.9	14.4	468.9	0.3	5.2	1.6	1.5	0.4	0.3	2678.2	95.4
20.00	2110.2	2.6	0.1	27.8	3.1	41.9	14.4	468.9	0.3	5.2	1.6	1.5	0.4	0.3	2678.2	95.4
21.00	1849.4	2.3	0.1	24.3	2.7	36.7	12.6	411.0	0.2	4.5	1.4	1.3	0.4	0.2	2347.1	83.6
22.00	1849.4	2.3	0.1	24.3	2.7	36.7	12.6	411.0	0.2	4.5	1.4	1.3	0.4	0.2	2347.1	83.6
23.00	1849.4	2.3	0.1	24.3	2.7	36.7	12.6	411.0	0.2	4.5	1.4	1.3	0.4	0.2	2347.1	83.6
24.00	1849.4	2.3	0.1	24.3	2.7	36.7	12.6	411.0	0.2	4.5	1.4	1.3	0.4	0.2	2347.1	83.6
25.00	1849.4	2.3	0.1	24.3	2.7	36.7	12.6	411.0	0.2	4.5	1.4	1.3	0.4	0.2	2347.1	83.6
26.00	1873.1	2.3	0.1	24.7	2.7	37.2	12.8	416.2	0.2	4.6	1.4	1.3	0.4	0.2	2377.2	84.7
27.00	1873.1	2.3	0.1	24.7	2.7	37.2	12.8	416.2	0.2	4.6	1.4	1.3	0.4	0.2	2377.2	84.7
28.00	1873.1	2.3	0.1	24.7	2.7	37.2	12.8	416.2	0.2	4.6	1.4	1.3	0.4	0.2	2377.2	84.7
29.00	1873.1	2.3	0.1	24.7	2.7	37.2	12.8	416.2	0.2	4.6	1.4	1.3	0.4	0.2	2377.2	84.7
30.00	1873.1	2.3	0.1	24.7	2.7	37.2	12.8	416.2	0.2	4.6	1.4	1.3	0.4	0.2	2377.2	84.7
30.00	1916.3	2.2	0.1	19.5	1.6	53.1	10.2	424.9	0.1	4.4	1.1	0.8	0.1	0.6	2435.1	59.1
30.00	1932.1	2.1	0.0	11.2	0.6	76.0	6.3	430.9	0.0	3.4	0.5	0.3	0.0	0.2	2463.6	30.9

PWR-13
MEU5(U,TH)-RUF PART 1 (MAKEUP)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	77047.6	0.0	0.0	0.0	0.0	3299.0	0.0	13196.0	0.0	0.0	0.0	0.0	0.0	0.0	93542.6	0.0
1.00	24312.8	0.0	0.0	0.0	0.0	1374.3	0.0	5497.2	0.0	0.0	0.0	0.0	0.0	0.0	31184.2	0.0
2.00	24312.8	0.0	0.0	0.0	0.0	1374.3	0.0	5497.2	0.0	0.0	0.0	0.0	0.0	0.0	31184.2	0.0
3.00	10423.5	0.0	0.0	0.0	0.0	589.2	0.0	2356.8	0.0	0.0	0.0	0.0	0.0	0.0	13369.5	0.0
4.00	5032.6	0.0	0.0	0.0	0.0	284.5	0.0	1137.9	0.0	0.0	0.0	0.0	0.0	0.0	6455.0	0.0
5.00	2309.7	0.0	0.0	0.0	0.0	130.5	0.0	522.2	0.0	0.0	0.0	0.0	0.0	0.0	2962.5	0.0
6.00	2309.7	0.0	0.0	0.0	0.0	130.5	0.0	522.2	0.0	0.0	0.0	0.0	0.0	0.0	2962.5	0.0
7.00	2309.7	0.0	0.0	0.0	0.0	130.5	0.0	522.2	0.0	0.0	0.0	0.0	0.0	0.0	2962.5	0.0
8.00	2406.5	0.0	0.0	0.0	0.0	136.0	0.0	544.2	0.0	0.0	0.0	0.0	0.0	0.0	3086.7	0.0
9.00	2406.5	0.0	0.0	0.0	0.0	136.0	0.0	544.2	0.0	0.0	0.0	0.0	0.0	0.0	3086.7	0.0
10.00	2406.5	0.0	0.0	0.0	0.0	136.0	0.0	544.2	0.0	0.0	0.0	0.0	0.0	0.0	3086.7	0.0
11.00	2406.5	0.0	0.0	0.0	0.0	136.0	0.0	544.2	0.0	0.0	0.0	0.0	0.0	0.0	3086.7	0.0
12.00	2406.5	0.0	0.0	0.0	0.0	136.0	0.0	544.2	0.0	0.0	0.0	0.0	0.0	0.0	3086.7	0.0
13.00	2163.8	0.0	0.0	0.0	0.0	122.3	0.0	489.2	0.0	0.0	0.0	0.0	0.0	0.0	2775.4	0.0
14.00	2163.8	0.0	0.0	0.0	0.0	122.3	0.0	489.2	0.0	0.0	0.0	0.0	0.0	0.0	2775.4	0.0
15.00	2163.8	0.0	0.0	0.0	0.0	122.3	0.0	489.2	0.0	0.0	0.0	0.0	0.0	0.0	2775.4	0.0
16.00	2163.8	0.0	0.0	0.0	0.0	122.3	0.0	489.2	0.0	0.0	0.0	0.0	0.0	0.0	2775.4	0.0
17.00	2163.8	0.0	0.0	0.0	0.0	122.3	0.0	489.2	0.0	0.0	0.0	0.0	0.0	0.0	2775.4	0.0
18.00	1896.4	0.0	0.0	0.0	0.0	107.2	0.0	428.8	0.0	0.0	0.0	0.0	0.0	0.0	2432.4	0.0
19.00	1896.4	0.0	0.0	0.0	0.0	107.2	0.0	428.8	0.0	0.0	0.0	0.0	0.0	0.0	2432.4	0.0
20.00	1896.4	0.0	0.0	0.0	0.0	107.2	0.0	428.8	0.0	0.0	0.0	0.0	0.0	0.0	2432.4	0.0
21.00	1896.4	0.0	0.0	0.0	0.0	107.2	0.0	428.8	0.0	0.0	0.0	0.0	0.0	0.0	2432.4	0.0
22.00	1896.4	0.0	0.0	0.0	0.0	107.2	0.0	428.8	0.0	0.0	0.0	0.0	0.0	0.0	2432.4	0.0
23.00	1920.7	0.0	0.0	0.0	0.0	108.6	0.0	434.3	0.0	0.0	0.0	0.0	0.0	0.0	2463.6	0.0
24.00	1920.7	0.0	0.0	0.0	0.0	108.6	0.0	434.3	0.0	0.0	0.0	0.0	0.0	0.0	2463.6	0.0
25.00	1920.7	0.0	0.0	0.0	0.0	108.6	0.0	434.3	0.0	0.0	0.0	0.0	0.0	0.0	2463.6	0.0
26.00	1920.7	0.0	0.0	0.0	0.0	108.6	0.0	434.3	0.0	0.0	0.0	0.0	0.0	0.0	2463.6	0.0
27.00	1920.7	0.0	0.0	0.0	0.0	108.6	0.0	434.3	0.0	0.0	0.0	0.0	0.0	0.0	2463.6	0.0
28.00	1920.7	0.0	0.0	0.0	0.0	108.6	0.0	434.3	0.0	0.0	0.0	0.0	0.0	0.0	2463.6	0.0
29.00	1920.7	0.0	0.0	0.0	0.0	108.6	0.0	434.3	0.0	0.0	0.0	0.0	0.0	0.0	2463.6	0.0

PWR-13
MEU5(U,TH)-RUF PART 2 (RECYCLE)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	63.1	62.3
ANNUAL EQUILIBRIUM	21.2	20.7
30 YR CUMULATIVE	559.9	547.1
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	146.2
ANNUAL EQUILIBRIUM	0.0	59.0
30 YR CUMULATIVE	0.0	1497.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	194.7
ANNUAL EQUILIBRIUM	0.0	83.6
30 YR CUMULATIVE	0.0	2103.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	1056.9	1047.4
ANNUAL EQUILIBRIUM	356.4	338.4
30 YR CUMULATIVE	8805.3	8915.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	1947.8	1103.3
ANNUAL EQUILIBRIUM	617.0	259.3
30 YR CUMULATIVE	16514.8	6873.9

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-13
MEU5(U,TH)-RUF PART 2 (RECYCLE)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	13720.2	0.0	0.3	197.9	10.3	536.0	56.1	3291.2	0.0	0.0	0.0	0.0	0.0	0.0	17811.9	0.0
4.00	18964.0	0.0	0.9	267.8	19.3	751.0	126.0	4447.5	0.0	0.0	0.0	0.0	0.0	0.0	24576.4	0.0
5.00	21635.6	0.0	0.9	336.7	38.8	825.9	159.1	5213.8	0.0	0.0	0.0	0.0	0.0	0.0	28210.8	0.0
6.00	21635.6	0.0	0.9	336.7	38.8	825.9	159.1	5213.8	0.0	0.0	0.0	0.0	0.0	0.0	28210.8	0.0
7.00	21635.6	0.0	0.9	336.7	38.8	825.9	159.1	5213.8	0.0	0.0	0.0	0.0	0.0	0.0	28210.8	0.0
8.00	21295.8	0.0	1.3	420.1	87.2	742.9	251.2	5294.4	0.0	0.0	0.0	0.0	0.0	0.0	28093.0	0.0
9.00	21295.8	0.0	1.3	420.1	87.2	742.9	251.2	5294.4	0.0	0.0	0.0	0.0	0.0	0.0	28093.0	0.0
10.00	21295.8	0.0	1.3	420.1	87.2	742.9	251.2	5294.4	0.0	0.0	0.0	0.0	0.0	0.0	28093.0	0.0
11.00	21295.8	0.0	1.3	420.1	87.2	742.9	251.2	5294.4	0.0	0.0	0.0	0.0	0.0	0.0	28093.0	0.0
12.00	21295.8	0.0	1.3	420.1	87.2	742.9	251.2	5294.4	0.0	0.0	0.0	0.0	0.0	0.0	28093.0	0.0
13.00	21321.6	0.0	1.6	442.2	129.0	760.9	337.1	5381.5	0.0	0.0	0.0	0.0	0.0	0.0	28374.0	0.0
14.00	21321.6	0.0	1.6	442.2	129.0	760.9	337.1	5381.5	0.0	0.0	0.0	0.0	0.0	0.0	28374.0	0.0
15.00	21321.6	0.0	1.6	442.2	129.0	760.9	337.1	5381.5	0.0	0.0	0.0	0.0	0.0	0.0	28374.0	0.0
16.00	21321.6	0.0	1.6	442.2	129.0	760.9	337.1	5381.5	0.0	0.0	0.0	0.0	0.0	0.0	28374.0	0.0
17.00	21321.6	0.0	1.6	442.2	129.0	760.9	337.1	5381.5	0.0	0.0	0.0	0.0	0.0	0.0	28374.0	0.0
18.00	21506.2	0.0	1.7	452.7	161.9	783.5	405.5	5436.4	0.0	0.0	0.0	0.0	0.0	0.0	28748.0	0.0
19.00	21506.2	0.0	1.7	452.7	161.9	783.5	405.5	5436.4	0.0	0.0	0.0	0.0	0.0	0.0	28748.0	0.0
20.00	21506.2	0.0	1.7	452.7	161.9	783.5	405.5	5436.4	0.0	0.0	0.0	0.0	0.0	0.0	28748.0	0.0
21.00	21506.2	0.0	1.7	452.7	161.9	783.5	405.5	5436.4	0.0	0.0	0.0	0.0	0.0	0.0	28748.0	0.0
22.00	21506.2	0.0	1.7	452.7	161.9	783.5	405.5	5436.4	0.0	0.0	0.0	0.0	0.0	0.0	28748.0	0.0
23.00	21314.9	0.0	1.7	447.4	188.8	824.6	474.1	5465.5	0.0	0.0	0.0	0.0	0.0	0.0	28717.0	0.0
24.00	21314.9	0.0	1.7	447.4	188.8	824.6	474.1	5465.5	0.0	0.0	0.0	0.0	0.0	0.0	28717.0	0.0
25.00	21314.9	0.0	1.7	447.4	188.8	824.6	474.1	5465.5	0.0	0.0	0.0	0.0	0.0	0.0	28717.0	0.0
26.00	21314.9	0.0	1.7	447.4	188.8	824.6	474.1	5465.5	0.0	0.0	0.0	0.0	0.0	0.0	28717.0	0.0
27.00	21314.9	0.0	1.7	447.4	188.8	824.6	474.1	5465.5	0.0	0.0	0.0	0.0	0.0	0.0	28717.0	0.0
28.00	21314.9	0.0	1.7	447.4	188.8	824.6	474.1	5465.5	0.0	0.0	0.0	0.0	0.0	0.0	28717.0	0.0
29.00	21314.9	0.0	1.7	447.4	188.8	824.6	474.1	5465.5	0.0	0.0	0.0	0.0	0.0	0.0	28717.0	0.0

PWR-13
MEU5(U,TH)-RUF PART 2 (RECYCLE)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.00	13327.6	16.5	0.8	235.2	48.9	183.1	150.5	3155.9	3.9	35.1	10.5	9.5	2.7	3.5	17183.6	600.7
7.00	18500.5	22.9	1.1	326.5	67.9	254.2	208.9	4380.9	5.4	48.0	14.6	13.2	3.7	4.8	23852.6	833.9
8.00	21113.3	26.1	1.2	372.6	77.4	290.1	238.4	4999.6	6.0	54.7	16.7	15.1	4.2	5.5	27221.0	967.6
9.00	21113.3	26.1	1.2	372.6	77.4	290.1	238.4	4999.6	6.0	54.7	16.7	15.1	4.2	5.5	27221.0	967.6
10.00	21113.3	26.1	1.2	372.6	77.4	290.1	238.4	4999.6	6.0	54.7	16.7	15.1	4.2	5.5	27221.0	967.6
11.00	20777.6	25.7	1.3	394.0	116.9	285.7	319.9	5080.5	7.7	56.0	17.0	15.2	4.2	6.9	27108.6	961.5
12.00	20777.6	25.7	1.3	394.0	116.9	285.7	319.9	5080.5	7.7	56.0	17.0	15.2	4.2	6.9	27108.6	961.5
13.00	20777.6	25.7	1.3	394.0	116.9	285.7	319.9	5080.5	7.7	56.0	17.0	15.2	4.2	6.9	27108.6	961.5
14.00	20777.6	25.7	1.3	394.0	116.9	285.7	319.9	5080.5	7.7	56.0	17.0	15.2	4.2	6.9	27108.6	961.5
15.00	20777.6	25.7	1.3	394.0	116.9	285.7	319.9	5080.5	7.7	56.0	17.0	15.2	4.2	6.9	27108.6	961.5
16.00	20806.4	25.3	1.4	407.1	148.6	309.3	386.9	5166.1	9.0	57.8	17.2	15.4	4.1	8.2	27363.0	969.8
17.00	20806.4	25.3	1.4	407.1	148.6	309.3	386.9	5166.1	9.0	57.8	17.2	15.4	4.1	8.2	27363.0	969.8
18.00	20806.4	25.3	1.4	407.1	148.6	309.3	386.9	5166.1	9.0	57.8	17.2	15.4	4.1	8.2	27363.0	969.8
19.00	20806.4	25.3	1.4	407.1	148.6	309.3	386.9	5166.1	9.0	57.8	17.2	15.4	4.1	8.2	27363.0	969.8
20.00	20806.4	25.3	1.4	407.1	148.6	309.3	386.9	5166.1	9.0	57.8	17.2	15.4	4.1	8.2	27363.0	969.8
21.00	20999.8	25.1	1.7	404.6	175.2	329.3	455.1	5218.6	10.2	59.5	17.2	15.4	3.9	9.4	27725.2	981.5
22.00	20999.8	25.1	1.7	404.6	175.2	329.3	455.1	5218.6	10.2	59.5	17.2	15.4	3.9	9.4	27725.2	981.5
23.00	20999.8	25.1	1.7	404.6	175.2	329.3	455.1	5218.6	10.2	59.5	17.2	15.4	3.9	9.4	27725.2	981.5
24.00	20999.8	25.1	1.7	404.6	175.2	329.3	455.1	5218.6	10.2	59.5	17.2	15.4	3.9	9.4	27725.2	981.5
25.00	20999.8	25.1	1.7	404.6	175.2	329.3	455.1	5218.6	10.2	59.5	17.2	15.4	3.9	9.4	27725.2	981.5
26.00	20807.9	24.9	1.7	421.6	193.4	349.8	519.1	5251.3	12.2	60.3	17.4	15.7	4.0	10.2	27689.5	987.6
27.00	20807.9	24.9	1.7	421.6	193.4	349.8	519.1	5251.3	12.2	60.3	17.4	15.7	4.0	10.2	27689.5	987.6
28.00	20807.9	24.9	1.7	421.6	193.4	349.8	519.1	5251.3	12.2	60.3	17.4	15.7	4.0	10.2	27689.5	987.6
29.00	20807.9	24.9	1.7	421.6	193.4	349.8	519.1	5251.3	12.2	60.3	17.4	15.7	4.0	10.2	27689.5	987.6
30.00	20807.9	24.9	1.7	421.6	193.4	349.8	519.1	5251.3	12.2	60.3	17.4	15.7	4.0	10.2	27689.5	987.6
30.00	21060.7	23.9	1.5	418.0	190.3	449.9	508.5	5243.1	5.9	55.5	12.7	9.6	1.5	30.9	28012.0	674.7
30.00	21227.6	21.9	1.5	419.9	188.3	601.5	493.9	5313.6	1.7	41.7	6.0	2.9	0.2	17.0	28337.7	352.4

PWR-14
LEU5 (U)-15 PERCENT IMPROVED

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	400.7	59.3
FINAL CORE	487.4	
ANNUAL EQUILIBRIUM	162.5	19.8
30 YR CUMULATIVE	5112.4	894.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	206.1	0.3
FINAL CORE	334.3	
ANNUAL EQUILIBRIUM	111.4	0.1
30 YR CUMULATIVE	3438.0	146.8
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	370.9
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	123.6
30 YR CUMULATIVE	0.0	4086.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	569.3
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	189.8
30 YR CUMULATIVE	0.0	6184.2
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1733.1	323.6
FINAL CORE	2015.0	
ANNUAL EQUILIBRIUM	671.7	107.9
30 YR CUMULATIVE	21211.0	4544.1
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.270
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30400.0
THERMAL EFFICIENCY		0.334

PWR-14
LEU5 (U)-15 PERCENT IMPROVED
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2201.0	0.0	97112.0	0.0	0.0	0.0	0.0	0.0	0.0	99313.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	853.0	0.0	19702.0	0.0	0.0	0.0	0.0	0.0	0.0	20555.0	0.0

PWR-14
LEU5 (U)-15 PERCENT IMPROVED
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	137.0	119.0	18953.0	8.0	120.0	58.0	37.0	18.0	0.0	19450.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	1798.0	434.0	96422.0	15.0	529.0	176.0	108.0	37.0	0.0	99519.0	0.0

PWR-15
LEU5 (U)-30 PERCENT IMPROVED

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	443.1	22.5
FINAL CORE	391.3	
ANNUAL EQUILIBRIUM	130.4	7.5
30 YR CUMULATIVE	4225.3	475.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	240.9	0.0
FINAL CORE	265.2	
ANNUAL EQUILIBRIUM	88.4	0.0
30 YR CUMULATIVE	2804.0	96.8
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	292.9
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	97.6
30 YR CUMULATIVE	0.0	3333.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	486.6
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	162.2
30 YR CUMULATIVE	0.0	5422.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1900.0	163.0
FINAL CORE	1620.5	
ANNUAL EQUILIBRIUM	540.2	54.3
30 YR CUMULATIVE	17564.6	2742.5
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.270
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30400.0
THERMAL EFFICIENCY		0.334

PWR-15
LEU5 (U)-30 PERCENT IMPROVED
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2413.0	0.0	96900.0	0.0	0.0	0.0	0.0	0.0	0.0	99313.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	16455.0	0.0	0.0	0.0	0.0	0.0	0.0	17141.0	0.0

PWR -15
LEU5 (U)-30 PERCENT IMPROVED
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	69.0	99.0	15682.0	8.0	92.0	53.0	32.0	21.0	0.0	16056.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	1482.0	458.0	96210.0	20.0	517.0	203.0	121.0	52.0	0.0	99063.0	0.0

PWR-16
LEU5, PU (U)-RUPU, SC, CP MAKEUP

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	400.7	102.0
FINAL CORE	426.9	
ANNUAL EQUILIBRIUM	142.3	26.0
30 YR CUMULATIVE	4719.5	866.6
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	206.1	2.2
FINAL CORE	257.4	
ANNUAL EQUILIBRIUM	85.8	0.8
30 YR CUMULATIVE	2813.0	38.8
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	410.2
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	219.8
30 YR CUMULATIVE	0.0	5986.4
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	559.1
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	373.3
30 YR CUMULATIVE	0.0	9741.5
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1733.1	552.8
FINAL CORE	1800.7	
ANNUAL EQUILIBRIUM	600.2	139.3
30 YR CUMULATIVE	19947.6	4615.3
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.270
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30400.0
THERMAL EFFICIENCY		0.334

PWR-16
LEU5, PU (U)-RUPU, SC, CP MAKEUP
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2201.0	0.0	97112.0	0.0	0.0	0.0	0.0	0.0	0.0	99313.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	1071.0	0.0	33048.0	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	1028.0	0.0	33517.0	0.0	0.0	0.0	0.0	0.0	0.0	34545.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	832.7	0.0	27150.1	0.0	0.0	0.0	0.0	0.0	0.0	27982.8	0.0
4.00	0.0	0.0	0.0	0.0	0.0	832.7	0.0	27150.1	0.0	0.0	0.0	0.0	0.0	0.0	27982.8	0.0
5.00	0.0	0.0	0.0	0.0	0.0	832.7	0.0	27150.1	0.0	0.0	0.0	0.0	0.0	0.0	27982.8	0.0
6.00	0.0	0.0	0.0	0.0	0.0	832.7	0.0	27150.1	0.0	0.0	0.0	0.0	0.0	0.0	27982.8	0.0
7.00	0.0	0.0	0.0	0.0	0.0	832.7	0.0	27150.1	0.0	0.0	0.0	0.0	0.0	0.0	27982.8	0.0
8.00	0.0	0.0	0.0	0.0	0.0	782.2	0.0	25502.8	0.0	0.0	0.0	0.0	0.0	0.0	26284.9	0.0
9.00	0.0	0.0	0.0	0.0	0.0	782.2	0.0	25502.8	0.0	0.0	0.0	0.0	0.0	0.0	26284.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	782.2	0.0	25502.8	0.0	0.0	0.0	0.0	0.0	0.0	26284.9	0.0
11.00	0.0	0.0	0.0	0.0	0.0	782.2	0.0	25502.8	0.0	0.0	0.0	0.0	0.0	0.0	26284.9	0.0
12.00	0.0	0.0	0.0	0.0	0.0	782.2	0.0	25502.8	0.0	0.0	0.0	0.0	0.0	0.0	26284.9	0.0
13.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
14.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
15.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
16.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
17.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
18.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
19.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
20.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
21.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
22.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
23.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
24.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
25.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
26.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
27.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
28.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0
29.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	24853.9	0.0	0.0	0.0	0.0	0.0	0.0	25616.1	0.0

PWR-16
LEU5, PU (U)-RUPU, SC, CP MAKEUP
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	235.0	55.0	33167.0	0.0	137.0	42.0	21.0	4.0	0.0	33661.0	380.0
2.00	0.0	0.0	0.0	0.0	0.0	219.0	81.0	30933.0	0.0	135.0	54.0	29.0	9.0	0.0	31460.0	730.0
3.00	0.0	0.0	0.0	0.0	0.0	248.0	110.0	31291.0	0.0	160.0	66.0	39.0	14.0	0.0	31928.0	1108.0
4.00	0.0	0.0	0.0	0.0	0.0	301.0	127.0	32271.0	0.0	183.0	70.0	44.0	14.0	0.0	33010.0	1120.0
5.00	0.0	0.0	0.0	0.0	0.0	282.0	123.0	32729.0	0.0	182.0	71.0	44.0	15.0	0.0	33446.0	1123.0
6.00	0.0	0.0	0.0	0.0	0.0	201.4	101.3	25692.1	3.9	184.9	102.4	46.8	24.8	0.0	26357.5	0.0
7.00	0.0	0.0	0.0	0.0	0.0	201.4	101.3	25692.1	3.9	184.9	102.4	46.8	24.8	0.0	26357.5	0.0
8.00	0.0	0.0	0.0	0.0	0.0	201.4	101.3	25692.1	3.9	184.9	102.4	46.8	24.8	0.0	26357.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	201.4	101.3	25692.1	3.9	184.9	102.4	46.8	24.8	0.0	26357.5	0.0
10.00	0.0	0.0	0.0	0.0	0.0	201.4	101.3	25692.1	3.9	184.9	102.4	46.8	24.8	0.0	26357.5	0.0
11.00	0.0	0.0	0.0	0.0	0.0	183.3	94.9	24049.0	4.0	199.0	127.0	57.8	34.8	0.0	24749.8	0.0
12.00	0.0	0.0	0.0	0.0	0.0	183.3	94.9	24049.0	4.0	199.0	127.0	57.8	34.8	0.0	24749.8	0.0
13.00	0.0	0.0	0.0	0.0	0.0	183.3	94.9	24049.0	4.0	199.0	127.0	57.8	34.8	0.0	24749.8	0.0
14.00	0.0	0.0	0.0	0.0	0.0	183.3	94.9	24049.0	4.0	199.0	127.0	57.8	34.8	0.0	24749.8	0.0
15.00	0.0	0.0	0.0	0.0	0.0	183.3	94.9	24049.0	4.0	199.0	127.0	57.8	34.8	0.0	24749.8	0.0
16.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	176.8	92.1	23372.4	4.2	212.7	147.1	66.4	43.8	0.0	24115.5	0.0

PWR-16
LEU5, PU (U)-RUPU, SC, CP RECYCLE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE		
ANNUAL EQUILIBRIUM	9.2	9.0
30 YR CUMULATIVE	240.4	213.3
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE		
ANNUAL EQUILIBRIUM	0.3	0.3
30 YR CUMULATIVE	12.1	7.7
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE		
ANNUAL EQUILIBRIUM	265.8	76.6
30 YR CUMULATIVE	6451.0	1680.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE		
ANNUAL EQUILIBRIUM	437.5	130.1
30 YR CUMULATIVE	10352.7	2809.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE		
ANNUAL EQUILIBRIUM	49.1	48.5
30 YR CUMULATIVE	1275.2	1140.8
NUMBER OF BATCHES		3
REFUEL TIME (YRS)		1.00
POWER (GWE)		1.270
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30400.0
THERMAL EFFICIENCY		0.334

PWR -16
LEU5, PU (U)-RUPU, SC, CP RECYCLE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	52.3	23.8	6112.7	3.6	168.1	70.6	36.7	13.8	0.0	6481.7	0.0
4.00	0.0	0.0	0.0	0.0	0.0	52.3	23.8	6112.7	3.6	168.1	70.6	36.7	13.8	0.0	6481.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	52.3	23.8	6112.7	3.6	168.1	70.6	36.7	13.8	0.0	6481.7	0.0
6.00	0.0	0.0	0.0	0.0	0.0	52.3	23.8	6112.7	3.6	168.1	70.6	36.7	13.8	0.0	6481.7	0.0
7.00	0.0	0.0	0.0	0.0	0.0	52.3	23.8	6112.7	3.6	168.1	70.6	36.7	13.8	0.0	6481.7	0.0
8.00	0.0	0.0	0.0	0.0	0.0	59.8	30.1	7621.4	4.8	228.2	126.4	57.7	30.6	0.0	8159.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	59.8	30.1	7621.4	4.8	228.2	126.4	57.7	30.6	0.0	8159.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	59.8	30.1	7621.4	4.8	228.2	126.4	57.7	30.6	0.0	8159.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	59.8	30.1	7621.4	4.8	228.2	126.4	57.7	30.6	0.0	8159.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	59.8	30.1	7621.4	4.8	228.2	126.4	57.7	30.6	0.0	8159.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
14.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
15.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
16.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
17.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
18.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
19.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
20.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
21.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
22.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
23.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
24.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
25.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
26.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
27.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
28.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	76.0	45.7	0.0	8819.2	0.0
29.00	0.0	0.0	0.0	0.0	0.0	62.3	32.2	8169.1	5.3	261.5	167.0	75.0	45.7	0.0	8819.2	0.0

PWR-16
LEU5, PU (U)-RUPU, SC, CP RECYCLE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	47.2	23.8	6025.0	0.9	43.3	24.0	11.0	5.8	0.0	6181.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	47.2	23.8	6025.0	0.9	43.3	24.0	11.0	5.8	0.0	6181.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	47.2	23.8	6025.0	0.9	43.3	24.0	11.0	5.8	0.0	6181.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	47.2	23.8	6025.0	0.9	43.3	24.0	11.0	5.8	0.0	6181.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	47.2	23.8	6025.0	0.9	43.3	24.0	11.0	5.8	0.0	6181.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	57.6	29.8	7557.4	1.3	62.5	39.9	18.2	10.9	0.0	7777.6	0.0
12.00	0.0	0.0	0.0	0.0	0.0	57.6	29.8	7557.4	1.3	62.5	39.9	18.2	10.9	0.0	7777.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	57.6	29.8	7557.4	1.3	62.5	39.9	18.2	10.9	0.0	7777.6	0.0
14.00	0.0	0.0	0.0	0.0	0.0	57.6	29.8	7557.4	1.3	62.5	39.9	18.2	10.9	0.0	7777.6	0.0
15.00	0.0	0.0	0.0	0.0	0.0	57.6	29.8	7557.4	1.3	62.5	39.9	18.2	10.9	0.0	7777.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
17.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
18.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
19.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
20.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
21.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
22.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
24.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
25.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
26.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
27.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
28.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
29.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0
30.00	0.0	0.0	0.0	0.0	0.0	61.6	32.1	8146.8	1.4	74.1	51.3	23.1	15.3	0.0	8405.8	0.0

PWR-17
LEU5 (U)-18 MONTH CYCLE

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	471.5	289.9
FINAL CORE	301.4	
ANNUAL EQUILIBRIUM	200.9	47.1
30 YR CUMULATIVE	6380.2	1528.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	266.0	46.9
FINAL CORE	187.4	
ANNUAL EQUILIBRIUM	124.9	7.2
30 YR CUMULATIVE	3979.4	280.7
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	940.2
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	174.2
30 YR CUMULATIVE	0.0	5160.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	1194.6
FINAL CORE	0.0	
ANNUAL EQUILIBRIUM	0.0	177.5
30 YR CUMULATIVE	0.0	5613.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	2011.7	1444.4
FINAL CORE	5250.4	
ANNUAL EQUILIBRIUM	906.6	235.9
30 YR CUMULATIVE	26774.4	7532.6
NUMBER OF BATCHES		4
REFUEL TIME (YRS)		1.50
POWER (GWE)		1.270
CAPACITY FACTOR		0.750
BURNUP (MWD/MT)		30868.0
THERMAL EFFICIENCY		0.334

PWR-17
LEU5 (U)-18 MONTH CYCLE
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	672.1	0.0	33446.9	0.0	0.0	0.0	0.0	0.0	0.0	34119.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	429.4	0.0	15899.5	0.0	0.0	0.0	0.0	0.0	0.0	16329.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	418.3	0.0	15484.8	0.0	0.0	0.0	0.0	0.0	0.0	15903.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	1035.0	0.0	31927.0	0.0	0.0	0.0	0.0	0.0	0.0	32962.0	0.0
1.50	0.0	0.0	0.0	0.0	0.0	1427.3	0.0	49367.7	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	1637.2	0.0	48738.8	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
4.50	0.0	0.0	0.0	0.0	0.0	1732.1	0.0	49062.9	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	1586.8	0.0	48789.2	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
7.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	1607.0	0.0	48769.0	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
10.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	1607.0	0.0	48769.0	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
13.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	1607.0	0.0	48769.0	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
16.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	1607.0	0.0	48769.0	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
19.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	1607.0	0.0	48769.0	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
22.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	1607.0	0.0	48769.0	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
25.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	1607.0	0.0	48769.0	0.0	0.0	0.0	0.0	0.0	0.0	50376.0	0.0
28.50	0.0	0.0	0.0	0.0	0.0	1727.0	0.0	49068.0	0.0	0.0	0.0	0.0	0.0	0.0	50795.0	0.0

PWR-17
LEU5 (U) -18 MONTH CYCLE
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.50	0.0	0.0	0.0	0.0	0.0	477.4	105.8	48702.6	0.0	215.1	66.4	34.5	7.3	0.0	49509.1	0.0
3.00	0.0	0.0	0.0	0.0	0.0	456.7	165.8	46446.3	0.0	243.3	92.9	54.2	16.5	0.0	47475.7	0.0
4.50	0.0	0.0	0.0	0.0	0.0	432.9	164.6	48341.7	0.0	256.1	97.2	57.8	17.9	0.0	49368.2	0.0
6.00	0.0	0.0	0.0	0.0	0.0	467.4	193.6	47600.7	0.0	268.8	4.0	64.2	21.0	0.0	48619.7	0.0
7.50	0.0	0.0	0.0	0.0	0.0	521.4	202.2	47940.4	0.0	274.2	2.7	64.1	19.9	0.0	49024.9	0.0
9.00	0.0	0.0	0.0	0.0	0.0	437.4	189.1	47634.5	0.0	266.7	5.3	64.5	21.8	0.0	48519.3	0.0
10.50	0.0	0.0	0.0	0.0	0.0	518.2	201.8	47944.0	0.0	274.0	2.8	64.1	20.0	0.0	49024.9	0.0
12.00	0.0	0.0	0.0	0.0	0.0	449.4	190.9	47621.1	0.0	267.5	4.7	64.4	1.5	0.0	48599.5	0.0
13.50	0.0	0.0	0.0	0.0	0.0	518.2	201.8	47944.0	0.0	274.0	2.8	64.1	20.0	0.0	49024.9	0.0
15.00	0.0	0.0	0.0	0.0	0.0	449.4	190.9	47621.1	0.0	267.5	4.7	64.4	1.5	0.0	48599.5	0.0
16.50	0.0	0.0	0.0	0.0	0.0	518.2	201.8	47944.0	0.0	274.0	2.8	64.1	20.0	0.0	49024.9	0.0
18.00	0.0	0.0	0.0	0.0	0.0	449.4	190.9	47621.1	0.0	267.5	4.7	64.4	1.5	0.0	48599.5	0.0
19.50	0.0	0.0	0.0	0.0	0.0	518.2	201.8	47944.0	0.0	274.0	2.8	64.1	20.0	0.0	49024.9	0.0
21.00	0.0	0.0	0.0	0.0	0.0	449.4	190.9	47621.1	0.0	267.5	4.7	64.4	1.5	0.0	48599.5	0.0
22.50	0.0	0.0	0.0	0.0	0.0	518.2	201.8	47944.0	0.0	274.0	2.8	64.1	20.0	0.0	49024.9	0.0
24.00	0.0	0.0	0.0	0.0	0.0	449.4	190.9	47621.1	0.0	267.5	4.7	64.4	1.5	0.0	48599.5	0.0
25.50	0.0	0.0	0.0	0.0	0.0	518.2	201.8	47944.0	0.0	274.0	2.8	64.1	20.0	0.0	49024.9	0.0
27.00	0.0	0.0	0.0	0.0	0.0	449.4	190.9	47621.1	0.0	267.5	4.7	64.4	1.5	0.0	48599.5	0.0
28.50	0.0	0.0	0.0	0.0	0.0	518.2	201.8	47944.0	0.0	274.0	2.8	64.1	20.0	0.0	49024.9	0.0
30.00	0.0	0.0	0.0	0.0	0.0	449.4	190.9	47621.1	0.0	267.5	4.7	64.4	1.5	0.0	48599.5	0.0

PWR-18
LEU5 (U),X-18 MONTH LOW BURN BATCHES

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	274.8	47.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	119.5	26.5
30 YR CUMULATIVE	3675.8	753.8
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	152.4	8.8
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	85.6	8.1
30 YR CUMULATIVE	2589.7	219.7
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	121.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	79.2
30 YR CUMULATIVE	0.0	2294.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	159.1
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	112.5
30 YR CUMULATIVE	0.0	3261.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1175.9	235.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	490.6	123.6
30 YR CUMULATIVE	15141.6	3547.4

NUMBER OF BATCHES	2
REFUELING INTERVAL (YRS)	1.50
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	46824.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 19.50

PWR-18
LEU5 (U),X-18 MONTH LOW BURN BATCHES
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	604.9	0.0	30102.1	0.0	0.0	0.0	0.0	0.0	0.0	30707.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	888.5	0.0	28531.5	0.0	0.0	0.0	0.0	0.0	0.0	29420.0	0.0
1.50	0.0	0.0	0.0	0.0	0.0	854.5	0.0	18655.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	1022.3	0.0	18487.7	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
4.50	0.0	0.0	0.0	0.0	0.0	915.0	0.0	18595.0	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	868.2	0.0	18641.8	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
7.50	0.0	0.0	0.0	0.0	0.0	963.8	0.0	18546.2	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	963.8	0.0	18546.2	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
10.50	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
13.50	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
16.50	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
19.50	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
22.50	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
25.50	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0
28.50	0.0	0.0	0.0	0.0	0.0	934.5	0.0	18575.5	0.0	0.0	0.0	0.0	0.0	0.0	19510.0	0.0

PWR-18
LEU5 (U),X-18 MONTH LOW BURN BATCHES
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.50	0.0	0.0	0.0	0.0	0.0	298.4	60.7	29634.8	0.0	132.2	42.5	22.4	5.0	0.0	30196.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.50	0.0	0.0	0.0	0.0	0.0	177.6	115.0	27482.3	0.0	155.1	79.2	46.6	25.5	0.0	28081.3	0.0
6.00	0.0	0.0	0.0	0.0	0.0	227.7	102.4	18090.1	0.0	114.8	47.9	30.9	11.8	0.0	18625.6	0.0
7.50	0.0	0.0	0.0	0.0	0.0	283.9	122.9	17903.3	0.0	119.1	49.3	32.9	11.7	0.0	18523.1	0.0
9.00	0.0	0.0	0.0	0.0	0.0	224.8	111.7	17976.1	0.0	117.1	50.8	33.1	13.5	0.0	18527.1	0.0
10.50	0.0	0.0	0.0	0.0	0.0	200.4	106.6	18006.3	0.0	115.3	51.6	33.1	14.4	0.0	18527.7	0.0
12.00	0.0	0.0	0.0	0.0	0.0	251.5	116.8	17944.2	0.0	118.5	50.0	33.0	12.6	0.0	18526.6	0.0
13.50	0.0	0.0	0.0	0.0	0.0	251.5	116.8	17944.2	0.0	118.5	50.0	33.0	12.6	0.0	18526.6	0.0
15.00	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
16.50	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
18.00	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
19.50	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
21.00	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
22.50	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
24.00	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
25.50	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
27.00	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
28.50	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0
30.00	0.0	0.0	0.0	0.0	0.0	235.4	113.8	17963.5	0.0	117.7	50.5	33.1	13.1	0.0	18527.1	0.0

PWR-18
LEU5 (U),X-18 MONTH HIGH BURN BATCHES

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	196.4	38.1
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	63.6	6.1
30 YR CUMULATIVE	2005.6	190.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	113.3	4.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	45.6	0.0
30 YR CUMULATIVE	1409.8	6.9
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	133.5
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	44.2
30 YR CUMULATIVE	0.0	1251.2
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	188.7
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	67.9
30 YR CUMULATIVE	0.0	1910.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	834.6	193.9
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	260.9	34.0
30 YR CUMULATIVE	8263.5	1049.4

NUMBER OF BATCHES	2
REFUELING INTERVAL (YRS)	1.50
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	62432.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 19.50

PWR-18
LEU5 (U),X-18 MONTH HIGH BURN BATCHES
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	736.6	0.0	28148.4	0.0	0.0	0.0	0.0	0.0	0.0	28885.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	323.4	0.0	9976.6	0.0	0.0	0.0	0.0	0.0	0.0	10300.0	0.0
1.50	0.0	0.0	0.0	0.0	0.0	454.6	0.0	9923.4	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	543.8	0.0	9834.2	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
4.50	0.0	0.0	0.0	0.0	0.0	486.7	0.0	9891.3	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	461.8	0.0	9916.2	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
7.50	0.0	0.0	0.0	0.0	0.0	512.7	0.0	9865.3	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	512.7	0.0	9865.3	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
10.50	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
13.50	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
16.50	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
19.50	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
22.50	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
25.50	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0
28.50	0.0	0.0	0.0	0.0	0.0	497.1	0.0	9880.9	0.0	0.0	0.0	0.0	0.0	0.0	10378.0	0.0

PWR-18
LEU5 (U),X-18 MONTH HIGH BURN BATCHES
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	246.2	87.8	27491.7	0.0	136.9	58.5	32.6	11.7	0.0	28065.4	0.0
4.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	35.0	41.2	9455.7	0.0	54.9	32.5	18.8	14.7	0.0	9652.8	0.0
7.50	0.0	0.0	0.0	0.0	0.0	65.1	57.8	9483.1	0.0	61.0	32.0	19.9	11.6	0.0	9730.5	0.0
9.00	0.0	0.0	0.0	0.0	0.0	84.9	70.5	9419.3	0.0	65.1	32.9	21.6	10.5	0.0	9704.8	0.0
10.50	0.0	0.0	0.0	0.0	0.0	60.8	63.2	9431.8	0.0	62.5	33.5	21.2	12.2	0.0	9685.2	0.0
12.00	0.0	0.0	0.0	0.0	0.0	50.6	59.6	9440.1	0.0	61.2	33.7	20.9	12.9	0.0	9679.0	0.0
13.50	0.0	0.0	0.0	0.0	0.0	71.1	66.6	9424.9	0.0	63.8	33.2	21.4	11.4	0.0	9692.4	0.0
15.00	0.0	0.0	0.0	0.0	0.0	71.1	66.6	9424.9	0.0	63.8	33.2	21.4	11.4	0.0	9692.4	0.0
16.50	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
18.00	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
19.50	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
21.00	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
22.50	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
24.00	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
25.50	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
27.00	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
28.50	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0
30.00	0.0	0.0	0.0	0.0	0.0	64.8	64.6	9428.9	0.0	63.0	33.4	21.2	11.8	0.0	9687.7	0.0

PWR-19
HEU5(U,TH)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	28.3	27.5
30 YR CUMULATIVE	852.8	830.9
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	134.6	51.7
30 YR CUMULATIVE	4431.8	1569.6
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	131.8	49.3
30 YR CUMULATIVE	4368.9	1510.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	******	******
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	388.2	396.2
30 YR CUMULATIVE	10014.7	11363.4
URANIUM-235 (KG/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	531.2	204.4
30 YR CUMULATIVE	17486.2	6203.4

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.300
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33961.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-19
HEU5(U,TH)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	29818.2	0.0	0.0	0.0	63.4	1254.8	0.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
1.00	29818.2	0.0	0.0	0.0	63.4	1254.8	0.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
2.00	29818.2	0.0	0.0	0.0	63.4	1254.8	0.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
3.00	29699.5	0.0	2.7	403.6	112.8	757.4	155.7	35.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
4.00	29699.5	0.0	2.7	403.6	112.8	757.4	155.7	35.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
5.00	29699.5	0.0	2.7	403.6	112.8	757.4	155.7	35.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
6.00	29699.5	0.0	2.7	403.6	112.8	757.4	155.7	35.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
7.00	29699.5	0.0	2.7	403.6	112.8	757.4	155.7	35.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
8.00	29569.1	0.0	5.3	484.0	169.9	680.1	218.5	40.6	0.0	0.0	0.0	0.0	0.0	0.0	31167.5	0.0
9.00	29569.1	0.0	5.3	484.0	169.9	680.1	218.5	40.6	0.0	0.0	0.0	0.0	0.0	0.0	31167.5	0.0
10.00	29569.1	0.0	5.3	484.0	169.9	680.1	218.5	40.6	0.0	0.0	0.0	0.0	0.0	0.0	31167.5	0.0
11.00	29569.1	0.0	5.3	484.0	169.9	680.1	218.5	40.6	0.0	0.0	0.0	0.0	0.0	0.0	31167.5	0.0
12.00	29569.1	0.0	5.3	484.0	169.9	680.1	218.5	40.6	0.0	0.0	0.0	0.0	0.0	0.0	31167.5	0.0
13.00	29448.9	0.0	7.3	501.3	213.6	678.4	272.9	45.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
14.00	29448.9	0.0	7.3	501.3	213.6	678.4	272.9	45.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
15.00	29448.9	0.0	7.3	501.3	213.6	678.4	272.9	45.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
16.00	29448.9	0.0	7.3	501.3	213.6	678.4	272.9	45.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
17.00	29448.9	0.0	7.3	501.3	213.6	678.4	272.9	45.0	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
18.00	29350.2	0.0	8.8	504.7	245.9	690.5	318.6	48.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
19.00	29350.2	0.0	8.8	504.7	245.9	690.5	318.6	48.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
20.00	29350.2	0.0	8.8	504.7	245.9	690.5	318.6	48.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
21.00	29350.2	0.0	8.8	504.7	245.9	690.5	318.6	48.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
22.00	29350.2	0.0	8.8	504.7	245.9	690.5	318.6	48.7	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
23.00	29264.4	0.0	10.0	507.3	267.5	705.1	361.7	51.4	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
24.00	29264.4	0.0	10.0	507.3	267.5	705.1	361.7	51.4	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
25.00	29264.4	0.0	10.0	507.3	267.5	705.1	361.7	51.4	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
26.00	29264.4	0.0	10.0	507.3	267.5	705.1	361.7	51.4	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
27.00	29264.4	0.0	10.0	507.3	267.5	705.1	361.7	51.4	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
28.00	29264.4	0.0	10.0	507.3	267.5	705.1	361.7	51.4	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0
29.00	29264.4	0.0	10.0	507.3	267.5	705.1	361.7	51.4	0.0	0.0	0.0	0.0	0.0	0.0	31167.4	0.0

PWR-19
HEU5(U,TH)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	29023.8	40.1	2.8	369.6	89.4	355.6	158.1	26.0	0.0	0.0	0.0	0.0	0.0	0.0	30065.4	0.0
2.00	29023.8	40.1	2.8	369.6	89.4	355.6	158.1	26.0	0.0	0.0	0.0	0.0	0.0	0.0	30065.4	0.0
3.00	29023.8	40.1	2.8	369.6	89.4	355.6	158.1	26.0	0.0	0.0	0.0	0.0	0.0	0.0	30065.4	0.0
4.00	29023.8	40.1	2.8	369.6	89.4	355.6	158.1	26.0	0.0	0.0	0.0	0.0	0.0	0.0	30065.4	0.0
5.00	29023.8	40.1	2.8	369.6	89.4	355.6	158.1	26.0	0.0	0.0	0.0	0.0	0.0	0.0	30065.4	0.0
6.00	28842.3	40.7	5.4	450.7	149.8	241.5	221.8	30.1	0.0	0.0	0.0	0.0	0.0	0.0	29982.3	0.0
7.00	28842.3	40.7	5.4	450.7	149.8	241.5	221.8	30.1	0.0	0.0	0.0	0.0	0.0	0.0	29982.3	0.0
8.00	28842.3	40.7	5.4	450.7	149.8	241.5	221.8	30.1	0.0	0.0	0.0	0.0	0.0	0.0	29982.3	0.0
9.00	28842.3	40.7	5.4	450.7	149.8	241.5	221.8	30.1	0.0	0.0	0.0	0.0	0.0	0.0	29982.3	0.0
10.00	28842.3	40.7	5.4	450.7	149.8	241.5	221.8	30.1	0.0	0.0	0.0	0.0	0.0	0.0	29982.3	0.0
11.00	28770.2	39.8	7.4	469.1	193.4	225.3	279.1	34.2	0.0	0.0	0.0	0.0	0.0	0.0	30018.5	0.0
12.00	28770.2	39.8	7.4	469.1	193.4	225.3	279.1	34.2	0.0	0.0	0.0	0.0	0.0	0.0	30018.5	0.0
13.00	28770.2	39.8	7.4	469.1	193.4	225.3	279.1	34.2	0.0	0.0	0.0	0.0	0.0	0.0	30018.5	0.0
14.00	28770.2	39.8	7.4	469.1	193.4	225.3	279.1	34.2	0.0	0.0	0.0	0.0	0.0	0.0	30018.5	0.0
15.00	28770.2	39.8	7.4	469.1	193.4	225.3	279.1	34.2	0.0	0.0	0.0	0.0	0.0	0.0	30018.5	0.0
16.00	28695.8	39.3	8.9	473.1	226.6	245.6	323.4	38.2	0.0	0.0	0.0	0.0	0.0	0.0	30050.9	0.0
17.00	28695.8	39.3	8.9	473.1	226.6	245.6	323.4	38.2	0.0	0.0	0.0	0.0	0.0	0.0	30050.9	0.0
18.00	28695.8	39.3	8.9	473.1	226.6	245.6	323.4	38.2	0.0	0.0	0.0	0.0	0.0	0.0	30050.9	0.0
19.00	28695.8	39.3	8.9	473.1	226.6	245.6	323.4	38.2	0.0	0.0	0.0	0.0	0.0	0.0	30050.9	0.0
20.00	28695.8	39.3	8.9	473.1	226.6	245.6	323.4	38.2	0.0	0.0	0.0	0.0	0.0	0.0	30050.9	0.0
21.00	28570.9	38.9	10.1	476.2	248.8	265.7	367.2	41.1	0.0	0.0	0.0	0.0	0.0	0.0	30018.9	0.0
22.00	28570.9	38.9	10.1	476.2	248.8	265.7	367.2	41.1	0.0	0.0	0.0	0.0	0.0	0.0	30018.9	0.0
23.00	28570.9	38.9	10.1	476.2	248.8	265.7	367.2	41.1	0.0	0.0	0.0	0.0	0.0	0.0	30018.9	0.0
24.00	28570.9	38.9	10.1	476.2	248.8	265.7	367.2	41.1	0.0	0.0	0.0	0.0	0.0	0.0	30018.9	0.0
25.00	28570.9	38.9	10.1	476.2	248.8	265.7	367.2	41.1	0.0	0.0	0.0	0.0	0.0	0.0	30018.9	0.0
26.00	28491.1	38.3	11.0	478.7	267.6	279.2	408.5	43.4	0.0	0.0	0.0	0.0	0.0	0.0	30017.8	0.0
27.00	28491.1	38.3	11.0	478.7	267.6	279.2	408.5	43.4	0.0	0.0	0.0	0.0	0.0	0.0	30017.8	0.0
28.00	28491.1	38.3	11.0	478.7	267.6	279.2	408.5	43.4	0.0	0.0	0.0	0.0	0.0	0.0	30017.8	0.0
29.00	28491.1	38.3	11.0	478.7	267.6	279.2	408.5	43.4	0.0	0.0	0.0	0.0	0.0	0.0	30017.8	0.0
30.00	28491.1	38.3	11.0	478.7	267.6	279.2	408.5	43.4	0.0	0.0	0.0	0.0	0.0	0.0	30017.8	0.0

PWR-20
MEU5(U,TH)-RU5,D

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	60.1	59.6
FINAL CORE	60.7	59.7
ANNUAL EQUILIBRIUM	20.2	19.7
30 YR CUMULATIVE	646.4	630.7
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	711.3	376.8
FINAL CORE	843.2	596.0
ANNUAL EQUILIBRIUM	280.0	107.9
30 YR CUMULATIVE	8758.0	3701.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	619.4	302.9
FINAL CORE	747.1	510.3
ANNUAL EQUILIBRIUM	248.1	84.4
30 YR CUMULATIVE	7749.1	2938.2
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	164.5
FINAL CORE	0.0	117.5
ANNUAL EQUILIBRIUM	0.0	70.0
30 YR CUMULATIVE	0.0	2103.7
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	204.9
FINAL CORE	0.0	140.9
ANNUAL EQUILIBRIUM	0.0	91.7
30 YR CUMULATIVE	0.0	2733.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	528.6
FINAL CORE	0.0	363.9
ANNUAL EQUILIBRIUM	0.0	251.9
30 YR CUMULATIVE	0.0	7441.8
URANIUM-235 (KG/GWE)		
INITIAL CORE	2841.7	1521.4
FINAL CORE	3361.2	2385.9
ANNUAL EQUILIBRIUM	1116.4	437.5
30 YR CUMULATIVE	34918.8	14973.3

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.295
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	34800.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-20
MEU5(U,TH)-RU5,D
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	62073.3	0.0	0.0	0.0	0.0	3680.0	0.0	24046.0	0.0	0.0	0.0	0.0	0.0	0.0	89799.3	0.0
1.00	20893.0	0.0	0.0	0.0	0.0	1395.9	0.0	7661.1	0.0	0.0	0.0	0.0	0.0	0.0	29950.0	0.0
2.00	20893.0	0.0	0.0	0.0	0.0	1395.9	0.0	7661.1	0.0	0.0	0.0	0.0	0.0	0.0	29950.0	0.0
3.00	20893.0	0.0	0.0	0.0	0.0	1400.6	29.4	7656.4	0.0	0.0	0.0	0.0	0.0	0.0	29979.4	0.0
4.00	20893.0	0.0	0.0	0.0	0.0	1409.1	82.2	7647.9	0.0	0.0	0.0	0.0	0.0	0.0	30032.2	0.0
5.00	20893.0	0.0	0.0	0.0	0.0	1416.2	126.7	7640.8	0.0	0.0	0.0	0.0	0.0	0.0	30076.7	0.0
6.00	20893.0	0.0	0.0	0.0	0.0	1416.2	126.7	7640.8	0.0	0.0	0.0	0.0	0.0	0.0	30076.7	0.0
7.00	20893.0	0.0	0.0	0.0	0.0	1416.2	126.7	7640.8	0.0	0.0	0.0	0.0	0.0	0.0	30076.7	0.0
8.00	20893.0	0.0	0.0	0.0	0.0	1419.4	146.7	7637.6	0.0	0.0	0.0	0.0	0.0	0.0	30096.7	0.0
9.00	20893.0	0.0	0.0	0.0	0.0	1425.1	182.6	7631.9	0.0	0.0	0.0	0.0	0.0	0.0	30132.6	0.0
10.00	20893.0	0.0	0.0	0.0	0.0	1430.0	212.9	7627.0	0.0	0.0	0.0	0.0	0.0	0.0	30162.9	0.0
11.00	20893.0	0.0	0.0	0.0	0.0	1430.0	212.9	7627.0	0.0	0.0	0.0	0.0	0.0	0.0	30162.9	0.0
12.00	20893.0	0.0	0.0	0.0	0.0	1430.0	212.9	7627.0	0.0	0.0	0.0	0.0	0.0	0.0	30162.9	0.0
13.00	20893.0	0.0	0.0	0.0	0.0	1432.1	226.5	7624.9	0.0	0.0	0.0	0.0	0.0	0.0	30176.5	0.0
14.00	20893.0	0.0	0.0	0.0	0.0	1436.0	250.9	7621.0	0.0	0.0	0.0	0.0	0.0	0.0	30200.9	0.0
15.00	20893.0	0.0	0.0	0.0	0.0	1439.3	271.5	7617.7	0.0	0.0	0.0	0.0	0.0	0.0	30221.5	0.0
16.00	20893.0	0.0	0.0	0.0	0.0	1439.3	271.5	7617.7	0.0	0.0	0.0	0.0	0.0	0.0	30221.5	0.0
17.00	20893.0	0.0	0.0	0.0	0.0	1439.3	271.5	7617.7	0.0	0.0	0.0	0.0	0.0	0.0	30221.5	0.0
18.00	20893.0	0.0	0.0	0.0	0.0	1440.8	280.7	7616.2	0.0	0.0	0.0	0.0	0.0	0.0	30230.7	0.0
19.00	20893.0	0.0	0.0	0.0	0.0	1443.5	297.3	7613.5	0.0	0.0	0.0	0.0	0.0	0.0	30247.3	0.0
20.00	20893.0	0.0	0.0	0.0	0.0	1445.7	311.3	7611.3	0.0	0.0	0.0	0.0	0.0	0.0	30261.3	0.0
21.00	20893.0	0.0	0.0	0.0	0.0	1445.7	311.3	7611.3	0.0	0.0	0.0	0.0	0.0	0.0	30261.3	0.0
22.00	20893.0	0.0	0.0	0.0	0.0	1445.7	311.3	7611.3	0.0	0.0	0.0	0.0	0.0	0.0	30261.3	0.0
23.00	20893.0	0.0	0.0	0.0	0.0	1446.7	317.6	7610.3	0.0	0.0	0.0	0.0	0.0	0.0	30267.6	0.0
24.00	20893.0	0.0	0.0	0.0	0.0	1448.5	328.9	7608.5	0.0	0.0	0.0	0.0	0.0	0.0	30278.9	0.0
25.00	20893.0	0.0	0.0	0.0	0.0	1450.0	338.4	7607.0	0.0	0.0	0.0	0.0	0.0	0.0	30288.4	0.0
26.00	20893.0	0.0	0.0	0.0	0.0	1450.0	338.4	7607.0	0.0	0.0	0.0	0.0	0.0	0.0	30288.4	0.0
27.00	20893.0	0.0	0.0	0.0	0.0	1450.0	338.4	7607.0	0.0	0.0	0.0	0.0	0.0	0.0	30288.4	0.0
28.00	20893.0	0.0	0.0	0.0	0.0	1450.7	342.7	7606.3	0.0	0.0	0.0	0.0	0.0	0.0	30292.7	0.0
29.00	20893.0	0.0	0.0	0.0	0.0	1452.0	350.4	7605.0	0.0	0.0	0.0	0.0	0.0	0.0	30300.4	0.0

PWR-20
MEU5(U,TH)-RU5,D
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	20758.1	23.0	0.3	90.0	3.9	786.8	36.7	7938.3	0.0	40.9	5.5	2.4	0.2	0.0	29686.1	380.0
2.00	20528.4	25.0	0.7	220.4	17.6	666.6	102.8	7626.5	0.0	66.0	16.3	12.6	2.1	0.0	29285.0	770.0
3.00	20324.5	27.5	1.0	298.7	32.2	516.8	158.4	7376.6	0.0	70.8	22.8	20.3	5.5	0.0	28855.1	1150.0
4.00	20324.5	27.5	1.0	298.7	32.2	516.8	158.4	7376.6	0.0	70.8	22.8	20.3	5.5	0.0	28855.1	1150.0
5.00	20324.5	27.5	1.0	298.7	32.2	516.8	158.4	7376.6	0.0	70.8	22.8	20.3	5.5	0.0	28855.1	1150.0
6.00	20324.5	27.5	1.0	298.7	32.2	521.5	183.4	7372.0	0.0	70.8	22.8	20.3	5.5	0.0	28880.2	1150.0
7.00	20324.5	27.5	1.0	298.7	32.2	530.0	228.3	7363.8	0.0	70.7	22.8	20.3	5.5	0.0	28925.3	1150.0
8.00	20324.5	27.5	1.0	298.7	32.2	537.1	266.1	7357.0	0.0	70.6	22.7	20.3	5.5	0.0	28963.2	1150.0
9.00	20324.5	27.5	1.0	298.7	32.2	537.1	266.1	7357.0	0.0	70.6	22.7	20.3	5.5	0.0	28963.2	1150.0
10.00	20324.5	27.5	1.0	298.7	32.2	537.1	266.1	7357.0	0.0	70.6	22.7	20.3	5.5	0.0	28963.2	1150.0
11.00	20324.5	27.5	1.0	298.7	32.2	540.3	283.1	7353.9	0.0	70.6	22.7	20.3	5.5	0.0	28980.3	1150.0
12.00	20324.5	27.5	1.0	298.7	32.2	546.0	313.6	7348.4	0.0	70.6	22.7	20.3	5.5	0.0	29011.0	1150.0
13.00	20324.5	27.5	1.0	298.7	32.2	550.9	339.4	7343.7	0.0	70.5	22.7	20.2	5.5	0.0	29036.8	1150.0
14.00	20324.5	27.5	1.0	298.7	32.2	550.9	339.4	7343.7	0.0	70.5	22.7	20.2	5.5	0.0	29036.8	1150.0
15.00	20324.5	27.5	1.0	298.7	32.2	550.9	339.4	7343.7	0.0	70.5	22.7	20.2	5.5	0.0	29036.8	1150.0
16.00	20324.5	27.5	1.0	298.7	32.2	553.0	350.9	7341.7	0.0	70.5	22.7	20.2	5.5	0.0	29048.4	1150.0
17.00	20324.5	27.5	1.0	298.7	32.2	556.9	371.7	7337.9	0.0	70.5	22.7	20.2	5.5	0.0	29069.3	1150.0
18.00	20324.5	27.5	1.0	298.7	32.2	560.2	389.2	7334.8	0.0	70.4	22.7	20.2	5.5	0.0	29086.9	1150.0
19.00	20324.5	27.5	1.0	298.7	32.2	560.2	389.2	7334.8	0.0	70.4	22.7	20.2	5.5	0.0	29086.9	1150.0
20.00	20324.5	27.5	1.0	298.7	32.2	560.2	389.2	7334.8	0.0	70.4	22.7	20.2	5.5	0.0	29086.9	1150.0
21.00	20324.5	27.5	1.0	298.7	32.2	561.7	397.0	7333.3	0.0	70.4	22.7	20.2	5.5	0.0	29094.7	1150.0
22.00	20324.5	27.5	1.0	298.7	32.2	564.4	411.1	7330.7	0.0	70.4	22.7	20.2	5.5	0.0	29108.9	1150.0
23.00	20324.5	27.5	1.0	298.7	32.2	566.6	423.0	7328.6	0.0	70.4	22.7	20.2	5.5	0.0	29120.9	1150.0
24.00	20324.5	27.5	1.0	298.7	32.2	566.6	423.0	7328.6	0.0	70.4	22.7	20.2	5.5	0.0	29120.9	1150.0
25.00	20324.5	27.5	1.0	298.7	32.2	566.6	423.0	7328.6	0.0	70.4	22.7	20.2	5.5	0.0	29120.9	1150.0
26.00	20324.5	27.5	1.0	298.7	32.2	567.6	428.4	7327.6	0.0	70.4	22.7	20.2	5.5	0.0	29126.3	1150.0
27.00	20324.5	27.5	1.0	298.7	32.2	569.4	438.0	7325.9	0.0	70.3	22.6	20.2	5.5	0.0	29135.8	1150.0
28.00	20324.5	27.5	1.0	298.7	32.2	570.9	446.0	7324.5	0.0	70.3	22.6	20.2	5.5	0.0	29143.9	1150.0
29.00	20324.5	27.5	1.0	298.7	32.2	570.9	446.0	7324.5	0.0	70.3	22.6	20.2	5.5	0.0	29143.9	1150.0
30.00	61711.8	62.6	0.8	408.7	29.1	3089.7	1208.0	22230.1	0.0	132.2	27.1	19.9	3.3	0.0	88923.1	750.0

PWR-21
LEU5 (U)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	399.6	101.9
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	191.1	41.5
30 YR CUMULATIVE	5955.7	1226.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	205.2	2.6
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	115.6	3.8
30 YR CUMULATIVE	3570.2	106.9
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	427.1
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	176.4
30 YR CUMULATIVE	0.0	5183.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	583.9
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	243.8
30 YR CUMULATIVE	0.0	7160.8
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1728.7	551.8
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	805.7	214.8
30 YR CUMULATIVE	25149.0	6366.4

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	30400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-21
LEU5 (U)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2195.5	0.0	97123.0	0.0	0.0	0.0	0.0	0.0	0.0	99318.5	0.0
1.00	0.0	0.0	0.0	0.0	0.0	1081.4	0.0	33034.6	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	1036.0	0.0	33506.5	0.0	0.0	0.0	0.0	0.0	0.0	34542.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	1023.2	0.0	33092.8	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0

PWR-21
LEU5 (U)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	264.0	35.4	32857.2	0.0	136.2	41.5	20.9	4.0	0.0	33359.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	217.3	81.2	30684.5	0.0	146.1	57.8	31.4	9.6	0.0	31227.9	0.0
3.00	0.0	0.0	0.0	0.0	0.0	219.5	110.6	31444.3	0.0	167.1	71.2	40.7	15.1	0.0	32068.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	291.8	127.0	32288.3	0.0	174.9	71.0	42.1	15.0	0.0	33010.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
6.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
7.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
8.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
9.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
10.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
11.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
12.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
13.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
14.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
15.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
16.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
17.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
18.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
19.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
20.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
21.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
22.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
23.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
24.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
25.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
26.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
27.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
28.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
29.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
30.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0

PWR-22
LEU5 (U)-OI,X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	463.4	75.1
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	168.1	22.6
30 YR CUMULATIVE	5308.6	635.1
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	257.5	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	116.6	1.4
30 YR CUMULATIVE	3613.4	32.7
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	467.2
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	122.1
30 YR CUMULATIVE	0.0	3510.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	674.2
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	180.6
30 YR CUMULATIVE	0.0	5177.3
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1980.0	445.7
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	693.5	118.9
30 YR CUMULATIVE	21979.8	3403.8

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50650.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-22
LEU5 (U)-OI,X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2514.6	0.0	96975.8	0.0	0.0	0.0	0.0	0.0	0.0	99490.3	0.0
1.00	0.0	0.0	0.0	0.0	0.0	809.1	0.0	19675.0	0.0	0.0	0.0	0.0	0.0	0.0	20484.1	0.0
2.00	0.0	0.0	0.0	0.0	0.0	809.1	0.0	19675.0	0.0	0.0	0.0	0.0	0.0	0.0	20484.1	0.0
3.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
4.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
5.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
6.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
7.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
8.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
9.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
11.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
12.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
13.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
14.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
15.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
16.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
17.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
18.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
19.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
20.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
21.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
22.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
23.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
24.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
25.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
26.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
27.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
28.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0
29.00	0.0	0.0	0.0	0.0	0.0	880.8	0.0	19603.1	0.0	0.0	0.0	0.0	0.0	0.0	20483.9	0.0

PWR-22
LEU5 (U)-OI,X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	139.4	35.1	19879.5	0.0	82.8	26.9	13.2	2.9	0.0	20179.8	0.0
2.00	0.0	0.0	0.0	0.0	0.0	127.2	50.6	19681.2	0.0	93.2	37.5	19.9	6.3	0.0	20015.9	0.0
3.00	0.0	0.0	0.0	0.0	0.0	117.8	70.2	19847.2	0.0	103.1	47.5	26.6	11.3	0.0	20223.7	0.0
4.00	0.0	0.0	0.0	0.0	0.0	77.0	69.3	16434.6	0.0	89.1	45.9	26.2	13.7	0.0	16755.8	0.0
5.00	0.0	0.0	0.0	0.0	0.0	104.6	94.0	18701.5	0.0	107.1	54.4	32.1	16.5	0.0	19110.2	0.0
6.00	0.0	0.0	0.0	0.0	0.0	154.6	110.0	19021.3	0.0	115.9	54.2	33.3	14.7	0.0	19504.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	129.2	112.3	18955.3	0.0	115.2	57.2	34.8	17.3	0.0	19421.3	0.0
8.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
9.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
10.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
11.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
12.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
13.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
14.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
15.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
16.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
17.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
18.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
19.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
20.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
21.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
22.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
23.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
24.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
25.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
26.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
27.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
28.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
29.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0
30.00	0.0	0.0	0.0	0.0	0.0	151.0	122.2	18881.5	0.0	119.3	57.5	35.7	16.9	0.0	19384.1	0.0

PWR-23
LEU5 (U)-LL,X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	451.7	71.3
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	163.9	17.4
30 YR CUMULATIVE	5172.4	496.7
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	247.8	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	114.9	0.0
30 YR CUMULATIVE	3546.5	0.4
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	428.4
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	116.3
30 YR CUMULATIVE	0.0	3329.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	623.3
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	171.5
30 YR CUMULATIVE	0.0	4902.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1934.1	428.8
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	675.5	96.9
30 YR CUMULATIVE	21393.9	2814.3

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	53660.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-23
LEU5 (U)-LL,X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2456.3	0.0	97005.2	0.0	0.0	0.0	0.0	0.0	0.0	99461.4	0.0
1.00	0.0	0.0	0.0	0.0	0.0	769.2	0.0	18905.9	0.0	0.0	0.0	0.0	0.0	0.0	19675.1	0.0
2.00	0.0	0.0	0.0	0.0	0.0	801.5	0.0	19162.9	0.0	0.0	0.0	0.0	0.0	0.0	19964.4	0.0
3.00	0.0	0.0	0.0	0.0	0.0	848.1	0.0	18768.3	0.0	0.0	0.0	0.0	0.0	0.0	19616.4	0.0
4.00	0.0	0.0	0.0	0.0	0.0	851.5	0.0	18765.9	0.0	0.0	0.0	0.0	0.0	0.0	19617.4	0.0
5.00	0.0	0.0	0.0	0.0	0.0	854.1	0.0	18474.0	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
6.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
7.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
8.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
9.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
10.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
11.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
12.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
13.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
14.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
15.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
16.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
17.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
18.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
19.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
20.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
21.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
22.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
23.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
24.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
25.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
26.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
27.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
28.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0
29.00	0.0	0.0	0.0	0.0	0.0	857.9	0.0	18470.2	0.0	0.0	0.0	0.0	0.0	0.0	19328.1	0.0

PWR-23
LEU5 (U)-LL,X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	129.8	34.3	19873.4	0.0	82.7	28.2	14.4	3.6	0.0	20166.4	0.0
2.00	0.0	0.0	0.0	0.0	0.0	124.5	49.4	19697.5	0.0	90.0	36.3	19.5	6.5	0.0	20023.7	0.0
3.00	0.0	0.0	0.0	0.0	0.0	105.5	73.2	17996.7	0.0	86.9	42.2	23.5	10.8	0.0	18338.8	0.0
4.00	0.0	0.0	0.0	0.0	0.0	111.8	78.2	18145.3	0.0	87.3	42.0	23.5	10.6	0.0	18498.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	73.0	93.6	17651.4	0.0	88.3	49.3	28.0	18.0	0.0	18001.6	0.0
6.00	0.0	0.0	0.0	0.0	0.0	133.9	142.3	17905.6	0.0	99.2	49.2	29.4	15.7	0.0	18375.3	0.0
7.00	0.0	0.0	0.0	0.0	0.0	71.6	137.3	18412.6	0.0	118.4	56.2	34.9	15.7	0.0	18846.7	0.0
8.00	0.0	0.0	0.0	0.0	0.0	118.2	145.3	18033.4	0.0	115.9	55.1	34.1	15.8	0.0	18517.8	0.0
9.00	0.0	0.0	0.0	0.0	0.0	121.6	145.9	18031.1	0.0	115.7	54.9	33.8	15.8	0.0	18518.8	0.0
10.00	0.0	0.0	0.0	0.0	0.0	124.2	146.3	17750.7	0.0	114.6	54.5	33.7	15.9	0.0	18239.9	0.0
11.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
12.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
13.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
14.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
15.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
16.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
17.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
18.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
19.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
20.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
21.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
22.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
23.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
24.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
25.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
26.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
27.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
28.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
29.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0
30.00	0.0	0.0	0.0	0.0	0.0	123.0	147.0	17747.0	0.0	114.1	54.2	33.6	15.9	0.0	18234.8	0.0

PWR-24
LEU5 (U)-X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	370.4	50.1
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	149.4	9.6
30 YR CUMULATIVE	4621.0	285.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	188.6	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	103.8	0.0
30 YR CUMULATIVE	3115.9	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	382.4
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	87.4
30 YR CUMULATIVE	0.0	2550.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	563.3
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	140.6
30 YR CUMULATIVE	0.0	4044.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1604.5	345.4
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	616.5	64.5
30 YR CUMULATIVE	19166.5	1941.3

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50000.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-24
LEU5 (U)-X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2037.7	0.0	91363.2	0.0	0.0	0.0	0.0	0.0	0.0	93400.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	762.3	0.0	22317.8	0.0	0.0	0.0	0.0	0.0	0.0	23080.1	0.0
2.00	0.0	0.0	0.0	0.0	0.0	614.0	0.0	17545.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
3.00	0.0	0.0	0.0	0.0	0.0	676.2	0.0	17483.5	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
4.00	0.0	0.0	0.0	0.0	0.0	711.8	0.0	17447.9	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
5.00	0.0	0.0	0.0	0.0	0.0	747.4	0.0	17412.3	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
6.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
7.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
8.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
9.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
10.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
11.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
12.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
13.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
14.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
15.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
16.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
17.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
18.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
19.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
20.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
21.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
22.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
23.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
24.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
25.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
26.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
27.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
28.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0
29.00	0.0	0.0	0.0	0.0	0.0	783.0	0.0	17376.7	0.0	0.0	0.0	0.0	0.0	0.0	18159.7	0.0

PWR-24
LEU5 (U)-X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	136.4	39.5	23396.4	0.0	88.2	32.0	14.8	3.8	0.0	23711.1	0.0
2.00	0.0	0.0	0.0	0.0	0.0	91.1	45.8	18247.9	0.0	74.4	33.1	16.3	6.0	0.0	18514.6	0.0
3.00	0.0	0.0	0.0	0.0	0.0	63.5	57.0	17251.6	0.0	74.5	37.5	18.9	9.0	0.0	17512.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	75.3	62.7	17652.6	0.0	78.0	41.2	21.3	11.0	0.0	17942.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	72.3	76.5	16805.9	0.0	76.7	42.5	22.5	13.7	0.0	17110.1	0.0
6.00	0.0	0.0	0.0	0.0	0.0	84.1	94.9	17747.9	0.0	81.8	45.5	24.0	14.8	0.0	18093.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	74.3	93.9	16970.2	0.0	79.1	44.2	24.2	15.4	0.0	17301.3	0.0
8.00	0.0	0.0	0.0	0.0	0.0	77.8	109.5	16871.6	0.0	80.6	46.1	25.7	17.1	0.0	17228.4	0.0
9.00	0.0	0.0	0.0	0.0	0.0	74.5	117.4	16810.4	0.0	82.0	47.1	26.2	18.3	0.0	17175.9	0.0
10.00	0.0	0.0	0.0	0.0	0.0	78.2	128.1	16776.1	0.0	83.1	48.5	27.0	18.7	0.0	17159.7	0.0
11.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
12.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
13.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
14.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
15.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
16.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
17.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
18.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
19.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
20.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
21.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
22.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
23.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
24.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
25.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
26.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
27.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
28.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
29.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0
30.00	0.0	0.0	0.0	0.0	0.0	81.9	134.2	16741.8	0.0	83.6	48.7	27.4	18.9	0.0	17136.5	0.0

PWR-25
LEU5,PU(U,TH)-RUPU PART 1 (MAKEUP)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	399.6	101.8
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	132.6	32.8
30 YR CUMULATIVE	4511.0	1030.6
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	205.2	2.6
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	82.4	6.4
30 YR CUMULATIVE	2762.2	155.1
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	427.3
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	106.3
30 YR CUMULATIVE	0.0	3743.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	560.6
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	0.0	144.9
30 YR CUMULATIVE	0.0	5105.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1728.7	551.8
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	556.7	160.6
30 YR CUMULATIVE	18987.3	5175.1

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	30400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-25
LEU5,PU(U,TH)-RUPU PART 1 (MAKEUP)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2195.5	0.0	97123.0	0.0	0.0	0.0	0.0	0.0	0.0	99318.5	0.0
1.00	0.0	0.0	0.0	0.0	0.0	1081.4	0.0	33034.6	0.0	0.0	0.0	0.0	0.0	0.0	34116.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	1036.0	0.0	33506.5	0.0	0.0	0.0	0.0	0.0	0.0	34542.5	0.0
3.00	0.0	0.0	0.0	0.0	0.0	828.0	0.0	26467.0	0.0	0.0	0.0	0.0	0.0	0.0	27295.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	886.0	0.0	26409.0	0.0	0.0	0.0	0.0	0.0	0.0	27295.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	800.0	0.0	25216.0	0.0	0.0	0.0	0.0	0.0	0.0	26016.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	791.0	0.0	24798.0	0.0	0.0	0.0	0.0	0.0	0.0	25589.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	811.0	0.0	24778.0	0.0	0.0	0.0	0.0	0.0	0.0	25589.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	763.0	0.0	23547.0	0.0	0.0	0.0	0.0	0.0	0.0	24310.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	746.0	0.0	23137.0	0.0	0.0	0.0	0.0	0.0	0.0	23883.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	755.0	0.0	23128.0	0.0	0.0	0.0	0.0	0.0	0.0	23883.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	754.0	0.0	23556.0	0.0	0.0	0.0	0.0	0.0	0.0	24310.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	742.0	0.0	23141.0	0.0	0.0	0.0	0.0	0.0	0.0	23883.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	726.0	0.0	21451.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	721.0	0.0	21883.0	0.0	0.0	0.0	0.0	0.0	0.0	22604.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	709.0	0.0	21468.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	718.0	0.0	21886.0	0.0	0.0	0.0	0.0	0.0	0.0	22604.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	708.0	0.0	21469.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	714.0	0.0	21463.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	692.0	0.0	20206.0	0.0	0.0	0.0	0.0	0.0	0.0	20898.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	707.0	0.0	21470.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	710.0	0.0	21467.0	0.0	0.0	0.0	0.0	0.0	0.0	22177.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	692.0	0.0	20206.0	0.0	0.0	0.0	0.0	0.0	0.0	20898.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	682.0	0.0	19789.0	0.0	0.0	0.0	0.0	0.0	0.0	20471.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	684.0	0.0	19787.0	0.0	0.0	0.0	0.0	0.0	0.0	20471.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	690.0	0.0	20208.0	0.0	0.0	0.0	0.0	0.0	0.0	20898.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	680.0	0.0	19791.0	0.0	0.0	0.0	0.0	0.0	0.0	20471.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	686.0	0.0	19785.0	0.0	0.0	0.0	0.0	0.0	0.0	20471.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	692.0	0.0	20206.0	0.0	0.0	0.0	0.0	0.0	0.0	20898.0	0.0

PWR-25
LEU5,PU(U,TH)-RUPU PART 1 (MAKEUP)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	264.0	55.4	32887.2	0.0	136.2	41.5	20.9	4.0	0.0	33409.2	0.0
2.00	0.0	0.0	0.0	0.0	0.0	217.3	81.2	30684.5	0.0	146.1	57.8	31.7	9.6	0.0	31228.2	0.0
3.00	0.0	0.0	0.0	0.0	0.0	219.5	110.6	31444.3	0.0	167.1	41.2	40.7	15.1	0.0	32038.5	0.0
4.00	0.0	0.0	0.0	0.0	0.0	291.8	127.0	32288.3	0.0	174.9	71.0	42.1	15.0	0.0	33010.1	0.0
5.00	0.0	0.0	0.0	0.0	0.0	272.8	127.2	32312.0	0.0	180.0	70.4	44.0	15.2	0.0	33021.6	0.0
6.00	0.0	0.0	0.0	0.0	0.0	226.0	99.0	25838.0	0.0	145.0	57.0	35.0	12.0	0.0	26412.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	260.0	104.0	25800.0	0.0	147.0	55.0	35.0	11.0	0.0	26412.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	222.0	95.0	24621.0	0.0	139.0	54.0	33.0	11.0	0.0	25175.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	220.0	94.0	24214.0	0.0	137.0	53.0	33.0	11.0	0.0	24762.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	232.0	96.0	24200.0	0.0	137.0	52.0	33.0	11.0	0.0	24761.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	216.0	90.0	22996.0	0.0	130.0	50.0	31.0	10.0	0.0	23523.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	210.0	88.0	22594.0	0.0	128.0	49.0	31.0	10.0	0.0	23110.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	216.0	89.0	22588.0	0.0	128.0	49.0	31.0	10.0	0.0	23111.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	211.0	90.0	23002.0	0.0	130.0	50.0	31.0	10.0	0.0	23524.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	208.0	88.0	22597.0	0.0	128.0	49.0	31.0	10.0	0.0	23111.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	215.0	85.0	20958.0	0.0	120.0	45.0	28.0	9.0	0.0	21460.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	208.0	85.0	21374.0	0.0	122.0	46.0	29.0	9.0	0.0	21873.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	205.0	84.0	20969.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	208.0	84.0	20966.0	0.0	119.0	45.0	28.0	9.0	0.0	21459.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	206.0	85.0	21376.0	0.0	121.0	46.0	29.0	9.0	0.0	21872.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	206.0	77.0	19748.0	0.0	109.0	41.0	26.0	8.0	0.0	20215.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	202.0	79.0	20976.0	0.0	115.0	44.0	28.0	9.0	0.0	21453.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	204.0	79.0	20974.0	0.0	115.0	44.0	28.0	9.0	0.0	21453.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	204.0	77.0	19750.0	0.0	109.0	41.0	26.0	8.0	0.0	20215.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	204.0	75.0	19343.0	0.0	107.0	40.0	25.0	8.0	0.0	19802.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	206.0	76.0	19340.0	0.0	107.0	40.0	25.0	8.0	0.0	19802.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	204.0	76.0	19751.0	0.0	109.0	41.0	26.0	8.0	0.0	20215.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	202.0	75.0	19345.0	0.0	107.0	40.0	25.0	8.0	0.0	19802.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	206.0	76.0	19340.0	0.0	107.0	40.0	25.0	8.0	0.0	19802.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	206.0	77.0	19748.0	0.0	109.0	41.0	26.0	8.0	0.0	20215.0	0.0

PWR-25
LEU5,PU(U,TH)-RUPU PART 2 (RECYCLE)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	11.7	4.1
30 YR CUMULATIVE	301.5	84.8
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.4	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	262.2	175.6
30 YR CUMULATIVE	6293.7	3738.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	*******	*******
ANNUAL EQUILIBRIUM	438.6	335.4
30 YR CUMULATIVE	10096.8	6889.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	63.8	35.4
30 YR CUMULATIVE	1649.6	744.1

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.270
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	30400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

PWR-25
LEU5,PU(U,TH)-RUPU PART 2 (RECYCLE)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	47.0	0.0	6583.0	0.0	132.0	40.0	18.0	4.0	0.0	6824.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	47.0	0.0	6545.0	0.0	140.0	56.0	27.0	9.0	0.0	6824.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	59.0	0.0	8196.0	0.0	160.0	66.0	35.0	14.0	0.0	8530.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	59.0	0.0	8174.0	0.0	176.0	68.0	38.0	14.0	0.0	8529.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	59.0	0.0	8174.0	0.0	176.0	69.0	38.0	14.0	0.0	8530.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9786.0	0.0	202.0	100.0	54.0	23.0	0.0	10235.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9761.0	0.0	212.0	107.0	58.0	27.0	0.0	10235.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9742.0	0.0	215.0	114.0	62.0	33.0	0.0	10236.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9732.0	0.0	220.0	117.0	64.0	33.0	0.0	10236.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	70.0	0.0	9731.0	0.0	221.0	117.0	64.0	33.0	0.0	10236.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	82.0	0.0	11376.0	0.0	233.0	135.0	74.0	42.0	0.0	11942.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11363.0	0.0	237.0	140.0	76.0	45.0	0.0	11942.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11349.0	0.0	241.0	144.0	78.0	49.0	0.0	11942.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11337.0	0.0	246.0	147.0	80.0	50.0	0.0	11941.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11341.0	0.0	244.0	147.0	80.0	49.0	0.0	11942.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11320.0	0.0	246.0	153.0	83.0	58.0	0.0	11941.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11306.0	0.0	250.0	157.0	86.0	61.0	0.0	11941.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12994.0	0.0	249.0	160.0	87.0	65.0	0.0	13648.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11303.0	0.0	247.0	158.0	86.0	66.0	0.0	11941.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	81.0	0.0	11301.0	0.0	248.0	158.0	86.0	66.0	0.0	11940.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12973.0	0.0	254.0	166.0	90.0	72.0	0.0	13648.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12962.0	0.0	257.0	169.0	92.0	74.0	0.0	13647.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12971.0	0.0	251.0	165.0	90.0	77.0	0.0	13647.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12961.0	0.0	256.0	169.0	92.0	77.0	0.0	13648.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12960.0	0.0	257.0	169.0	92.0	77.0	0.0	13648.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12956.0	0.0	254.0	169.0	92.0	83.0	0.0	13647.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	93.0	0.0	12952.0	0.0	254.0	171.0	93.0	84.0	0.0	13647.0	0.0

PWR-25
LEU5,PU(U,TH)-RUPU PART 2 (RECYCLE)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	19.0	5.0	6427.0	0.0	64.0	47.0	27.0	12.0	0.0	6601.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	21.0	5.0	6395.0	0.0	72.0	56.0	32.0	17.0	0.0	6598.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	26.0	6.0	8006.0	0.0	84.0	64.0	38.0	23.0	0.0	8247.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	27.0	6.0	7990.0	0.0	92.0	69.0	41.0	23.0	0.0	8248.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	27.0	6.0	7989.0	0.0	92.0	69.0	41.0	23.0	0.0	8247.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	33.0	7.0	9564.0	0.0	112.0	90.0	54.0	33.0	0.0	9893.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	34.0	7.0	9543.0	0.0	118.0	96.0	57.0	36.0	0.0	9891.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	35.0	7.0	9526.0	0.0	121.0	100.0	60.0	41.0	0.0	9890.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	36.0	7.0	9518.0	0.0	125.0	103.0	61.0	41.0	0.0	9891.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	36.0	7.0	9517.0	0.0	125.0	103.0	61.0	41.0	0.0	9890.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	40.0	8.0	11121.0	0.0	134.0	114.0	68.0	51.0	0.0	11536.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	41.0	8.0	11109.0	0.0	138.0	117.0	70.0	54.0	0.0	11537.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	41.0	8.0	11097.0	0.0	140.0	120.0	72.0	57.0	0.0	11535.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	42.0	8.0	11086.0	0.0	144.0	123.0	74.0	57.0	0.0	11534.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	42.0	8.0	11088.0	0.0	143.0	123.0	73.0	57.0	0.0	11534.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	44.0	9.0	12263.0	0.0	142.0	124.0	74.0	69.0	0.0	12725.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	41.0	8.0	10672.0	0.0	142.0	125.0	74.0	68.0	0.0	11130.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	42.0	8.0	10671.0	0.0	142.0	125.0	74.0	68.0	0.0	11130.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	45.0	9.0	12243.0	0.0	146.0	128.0	77.0	75.0	0.0	12723.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	45.0	9.0	12454.0	0.0	148.0	131.0	78.0	76.0	0.0	12941.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	45.0	9.0	12239.0	0.0	144.0	127.0	76.0	79.0	0.0	12719.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	45.0	9.0	12231.0	0.0	147.0	130.0	78.0	79.0	0.0	12719.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	46.0	9.0	12230.0	0.0	147.0	130.0	78.0	79.0	0.0	12719.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	46.0	9.0	12226.0	0.0	146.0	130.0	77.0	83.0	0.0	12717.0	0.0
30.00	0.0	0.0	0.0	0.0	0.0	46.0	9.0	12221.0	0.0	147.0	131.0	78.0	84.0	0.0	12716.0	0.0

SSCR-1
LEU5(U)

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	379.4	87.6
FINAL CORE	516.1	205.1
ANNUAL EQUILIBRIUM	172.0	34.1
30 YR CUMULATIVE	5368.7	1179.6
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	183.9	0.8
FINAL CORE	297.0	63.5
ANNUAL EQUILIBRIUM	99.0	0.2
30 YR CUMULATIVE	3054.5	69.2
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	525.8
FINAL CORE	0.0	480.9
ANNUAL EQUILIBRIUM	0.0	202.3
30 YR CUMULATIVE	0.0	6264.6
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	719.9
FINAL CORE	0.0	634.4
ANNUAL EQUILIBRIUM	0.0	284.4
30 YR CUMULATIVE	0.0	8743.9
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1656.0	501.8
FINAL CORE	2193.3	964.7
ANNUAL EQUILIBRIUM	731.1	185.9
30 YR CUMULATIVE	22858.2	6304.5

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	30390.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

SSCR-1
LEU5(U)
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2086.5	0.0	100700.0	0.0	0.0	0.0	0.0	0.0	0.0	102786.5	0.0
1.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	921.2	0.0	33198.8	0.0	0.0	0.0	0.0	0.0	0.0	34120.0	0.0

SSCR-1
LEU5(U)
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	207.2	48.1	33177.1	0.5	158.7	48.4	24.7	4.6	3.9	33673.2	438.1
2.00	0.0	0.0	0.0	0.0	0.0	183.9	77.8	32756.9	2.7	183.9	71.2	40.8	12.4	10.0	33339.7	768.5
3.00	0.0	0.0	0.0	0.0	0.0	241.2	120.3	32291.3	5.4	204.2	82.4	50.2	16.8	16.7	33028.6	1022.6
4.00	0.0	0.0	0.0	0.0	0.0	239.1	115.8	32337.9	5.4	203.9	80.4	48.5	15.4	16.7	33063.2	1035.3
5.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
6.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
7.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
8.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
9.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
10.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
11.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
12.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
13.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
14.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
15.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
16.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
17.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
18.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
19.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
20.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
21.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
22.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
23.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
24.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
25.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
26.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
27.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
28.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
29.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
30.00	0.0	0.0	0.0	0.0	0.0	234.3	116.6	32316.0	5.4	205.4	81.9	49.5	16.1	16.7	33041.9	1054.7
30.00	0.0	0.0	0.0	0.0	0.0	385.3	96.7	32634.3	1.7	177.4	55.3	31.8	6.7	8.5	33397.7	711.8
30.00	0.0	0.0	0.0	0.0	0.0	595.9	60.5	32924.4	0.3	130.6	24.9	11.2	1.1	3.1	33752.0	359.8

SSCR-2
LEU5(U)-X

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	383.0	52.2
FINAL CORE	743.3	275.6
ANNUAL EQUILIBRIUM	148.7	17.1
30 YR CUMULATIVE	4694.0	738.8
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	186.8	0.0
FINAL CORE	494.7	120.2
ANNUAL EQUILIBRIUM	98.9	0.0
30 YR CUMULATIVE	3056.1	120.2
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	539.3
FINAL CORE	0.0	554.8
ANNUAL EQUILIBRIUM	0.0	136.9
30 YR CUMULATIVE	0.0	4379.1
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	793.6
FINAL CORE	0.0	756.4
ANNUAL EQUILIBRIUM	0.0	208.7
30 YR CUMULATIVE	0.0	6557.7
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	1670.2	360.9
FINAL CORE	3087.1	1240.2
ANNUAL EQUILIBRIUM	617.4	97.7
30 YR CUMULATIVE	19575.2	3946.1

NUMBER OF BATCHES	5
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	50650.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

SSCR-2
LEU5(U)-X
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	2104.5	0.0	100681.5	0.0	0.0	0.0	0.0	0.0	0.0	102785.9	0.0
1.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
6.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
7.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
8.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
9.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
10.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
11.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
12.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
13.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
14.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
15.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
16.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
17.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
18.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
19.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
20.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
21.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
22.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
23.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
24.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
25.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
26.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
27.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
28.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0
29.00	0.0	0.0	0.0	0.0	0.0	777.9	0.0	19694.1	0.0	0.0	0.0	0.0	0.0	0.0	20472.0	0.0

SSCR-2
LEU5(U)-X
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	130.9	29.4	19906.7	0.2	91.4	28.6	14.3	2.8	2.4	20206.6	258.6
2.00	0.0	0.0	0.0	0.0	0.0	100.4	40.8	19722.2	0.8	102.9	41.7	22.4	7.1	4.7	20043.0	407.9
3.00	0.0	0.0	0.0	0.0	0.0	68.4	47.8	19535.7	2.6	108.8	51.6	29.7	13.1	9.4	19867.1	662.1
4.00	0.0	0.0	0.0	0.0	0.0	53.3	57.1	19090.1	5.0	112.0	58.5	35.2	17.7	13.2	19441.9	864.3
5.00	0.0	0.0	0.0	0.0	0.0	101.7	102.2	18974.4	8.2	124.0	63.4	38.9	19.3	16.8	19448.9	1075.0
6.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
7.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
8.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
9.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
10.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
11.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
12.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
13.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
14.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
15.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
16.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
17.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
18.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
19.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
20.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
21.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
22.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
23.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
24.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
25.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
26.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
27.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
28.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
29.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
30.00	0.0	0.0	0.0	0.0	0.0	123.1	109.7	18877.8	8.2	131.6	63.4	40.8	18.8	16.8	19390.2	1060.0
30.00	0.0	0.0	0.0	0.0	0.0	189.7	103.4	19063.9	5.0	131.4	54.1	35.2	12.2	13.2	19608.0	849.6
30.00	0.0	0.0	0.0	0.0	0.0	281.6	90.8	19238.7	2.5	126.0	41.7	26.8	6.5	9.1	19823.7	638.6
30.00	0.0	0.0	0.0	0.0	0.0	404.0	70.6	19401.6	0.9	110.9	26.8	16.0	2.4	5.2	20038.3	426.9
30.00	0.0	0.0	0.0	0.0	0.0	564.3	41.3	19553.5	0.1	75.5	11.0	4.8	0.3	1.8	20252.6	215.7

SSCR-3
MEU5(U,TH)-RUF MAKEUP FUEL

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	77.1	74.9
FINAL CORE	4.2	4.1
ANNUAL EQUILIBRIUM	1.6	1.5
30 YR CUMULATIVE	186.8	181.7
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	639.4	273.4
FINAL CORE	43.7	21.9
ANNUAL EQUILIBRIUM	16.3	5.2
30 YR CUMULATIVE	1777.8	648.5
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	581.3	228.2
FINAL CORE	39.8	18.7
ANNUAL EQUILIBRIUM	14.8	4.2
30 YR CUMULATIVE	1616.3	529.9
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	150.6
FINAL CORE	0.0	8.4
ANNUAL EQUILIBRIUM	0.0	3.8
30 YR CUMULATIVE	0.0	415.8
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	191.5
FINAL CORE	0.0	10.5
ANNUAL EQUILIBRIUM	0.0	5.0
30 YR CUMULATIVE	0.0	538.1
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	728.1
FINAL CORE	0.0	36.8
ANNUAL EQUILIBRIUM	0.0	18.1
30 YR CUMULATIVE	0.0	1984.5
URANIUM-235 (KG/GWE)		
INITIAL CORE	2541.4	1098.2
FINAL CORE	173.8	87.9
ANNUAL EQUILIBRIUM	64.7	21.2
30 YR CUMULATIVE	7065.9	2612.9

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

SSCR-3
MEU5(U,TH)-RUF MAKEUP FUEL
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	77526.4	0.0	0.0	0.0	25.8	3202.1	0.0	12808.4	0.0	0.0	0.0	0.0	0.0	0.0	93562.6	0.0
1.00	24673.6	0.0	0.0	0.0	10.1	1276.0	0.0	5093.9	0.0	0.0	0.0	0.0	0.0	0.0	31053.6	0.0
2.00	24673.6	0.0	0.0	0.0	10.1	1276.0	0.0	5093.9	0.0	0.0	0.0	0.0	0.0	0.0	31053.6	0.0
3.00	10053.3	0.0	0.0	0.0	4.1	519.9	0.0	2079.7	0.0	0.0	0.0	0.0	0.0	0.0	12657.0	0.0
4.00	6175.3	0.0	0.0	0.0	2.5	319.3	0.0	1277.5	0.0	0.0	0.0	0.0	0.0	0.0	7774.6	0.0
5.00	3683.2	0.0	0.0	0.0	1.5	190.5	0.0	761.9	0.0	0.0	0.0	0.0	0.0	0.0	4637.1	0.0
6.00	2622.5	0.0	0.0	0.0	1.1	135.6	0.0	542.5	0.0	0.0	0.0	0.0	0.0	0.0	3301.7	0.0
7.00	2622.5	0.0	0.0	0.0	1.1	135.6	0.0	542.5	0.0	0.0	0.0	0.0	0.0	0.0	3301.7	0.0
8.00	2015.6	0.0	0.0	0.0	0.8	104.2	0.0	417.0	0.0	0.0	0.0	0.0	0.0	0.0	2537.6	0.0
9.00	2015.6	0.0	0.0	0.0	0.8	104.2	0.0	417.0	0.0	0.0	0.0	0.0	0.0	0.0	2537.6	0.0
10.00	2015.6	0.0	0.0	0.0	0.8	104.2	0.0	417.0	0.0	0.0	0.0	0.0	0.0	0.0	2537.6	0.0
11.00	2015.6	0.0	0.0	0.0	0.8	104.2	0.0	417.0	0.0	0.0	0.0	0.0	0.0	0.0	2537.6	0.0
12.00	2015.6	0.0	0.0	0.0	0.8	104.2	0.0	417.0	0.0	0.0	0.0	0.0	0.0	0.0	2537.6	0.0
13.00	1579.9	0.0	0.0	0.0	0.6	81.7	0.0	326.8	0.0	0.0	0.0	0.0	0.0	0.0	1989.0	0.0
14.00	1579.9	0.0	0.0	0.0	0.6	81.7	0.0	326.8	0.0	0.0	0.0	0.0	0.0	0.0	1989.0	0.0
15.00	1579.9	0.0	0.0	0.0	0.6	81.7	0.0	326.8	0.0	0.0	0.0	0.0	0.0	0.0	1989.0	0.0
16.00	1579.9	0.0	0.0	0.0	0.6	81.7	0.0	326.8	0.0	0.0	0.0	0.0	0.0	0.0	1989.0	0.0
17.00	1579.9	0.0	0.0	0.0	0.6	81.7	0.0	326.8	0.0	0.0	0.0	0.0	0.0	0.0	1989.0	0.0
18.00	1575.7	0.0	0.0	0.0	0.6	81.5	0.0	326.0	0.0	0.0	0.0	0.0	0.0	0.0	1983.8	0.0
19.00	1575.7	0.0	0.0	0.0	0.6	81.5	0.0	326.0	0.0	0.0	0.0	0.0	0.0	0.0	1983.8	0.0
20.00	1575.7	0.0	0.0	0.0	0.6	81.5	0.0	326.0	0.0	0.0	0.0	0.0	0.0	0.0	1983.8	0.0
21.00	1575.7	0.0	0.0	0.0	0.6	81.5	0.0	326.0	0.0	0.0	0.0	0.0	0.0	0.0	1983.8	0.0
22.00	1575.7	0.0	0.0	0.0	0.6	81.5	0.0	326.0	0.0	0.0	0.0	0.0	0.0	0.0	1983.8	0.0
23.00	1411.7	0.0	0.0	0.0	0.6	73.0	0.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.3	0.0
24.00	1411.7	0.0	0.0	0.0	0.6	73.0	0.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.3	0.0
25.00	1411.7	0.0	0.0	0.0	0.6	73.0	0.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.3	0.0
26.00	1411.7	0.0	0.0	0.0	0.6	73.0	0.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.3	0.0
27.00	1411.7	0.0	0.0	0.0	0.6	73.0	0.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.3	0.0
28.00	1411.7	0.0	0.0	0.0	0.6	73.0	0.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.3	0.0
29.00	1411.7	0.0	0.0	0.0	0.6	73.0	0.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	1777.3	0.0

SSCR-3
MEU5(U,TH)-RUF MAKEUP FUEL
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	26708.5	38.4	0.1	186.9	18.8	480.5	60.5	3157.4	0.3	33.3	7.0	4.3	0.5	2.6	30699.1	324.0
2.00	25090.2	34.4	0.1	295.7	36.7	440.3	118.0	4157.5	0.3	51.8	14.1	12.5	2.9	8.0	30262.6	712.9
3.00	23554.9	30.9	0.1	331.1	46.8	462.9	166.9	5203.5	0.3	68.3	20.3	19.6	5.8	14.5	29925.8	1069.3
4.00	24021.2	29.6	0.9	327.9	40.2	418.5	154.6	4866.5	0.3	58.0	17.7	17.3	5.3	14.5	29972.4	1069.3
5.00	24021.2	29.6	0.9	327.9	40.2	418.5	154.6	4866.5	0.3	58.0	17.7	17.3	5.3	14.5	29972.4	1069.3
6.00	9788.8	12.1	0.4	133.8	16.4	170.6	62.8	1983.0	0.1	23.6	7.2	7.0	2.1	5.9	12213.9	435.9
7.00	6012.8	7.4	0.2	82.2	10.1	104.8	38.6	1218.1	0.1	14.5	4.4	4.3	1.3	3.6	7502.5	267.7
8.00	3586.3	4.4	0.1	49.0	6.0	62.5	23.0	726.5	0.0	8.7	2.6	2.6	0.8	2.2	4474.7	159.7
9.00	2553.5	3.1	0.1	34.9	4.3	44.5	16.4	517.3	0.0	6.2	1.9	1.8	0.6	1.5	3186.1	113.7
10.00	2553.5	3.1	0.1	34.9	4.3	44.5	16.4	517.3	0.0	6.2	1.9	1.8	0.6	1.5	3186.1	113.7
11.00	1962.9	2.4	0.1	26.8	3.3	34.2	12.6	397.7	0.0	4.7	1.4	1.4	0.4	1.2	2449.2	87.4
12.00	1962.9	2.4	0.1	26.8	3.3	34.2	12.6	397.7	0.0	4.7	1.4	1.4	0.4	1.2	2449.2	87.4
13.00	1962.9	2.4	0.1	26.8	3.3	34.2	12.6	397.7	0.0	4.7	1.4	1.4	0.4	1.2	2449.2	87.4
14.00	1962.9	2.4	0.1	26.8	3.3	34.2	12.6	397.7	0.0	4.7	1.4	1.4	0.4	1.2	2449.2	87.4
15.00	1962.9	2.4	0.1	26.8	3.3	34.2	12.6	397.7	0.0	4.7	1.4	1.4	0.4	1.2	2449.2	87.4
16.00	1538.7	1.9	0.1	21.0	2.6	26.7	9.9	311.7	0.0	3.7	1.1	1.1	0.4	0.9	1919.8	68.5
17.00	1538.7	1.9	0.1	21.0	2.6	26.7	9.9	311.7	0.0	3.7	1.1	1.1	0.4	0.9	1919.8	68.5
18.00	1538.7	1.9	0.1	21.0	2.6	26.7	9.9	311.7	0.0	3.7	1.1	1.1	0.4	0.9	1919.8	68.5
19.00	1538.7	1.9	0.1	21.0	2.6	26.7	9.9	311.7	0.0	3.7	1.1	1.1	0.4	0.9	1919.8	68.5
20.00	1538.7	1.9	0.1	21.0	2.6	26.7	9.9	311.7	0.0	3.7	1.1	1.1	0.4	0.9	1919.8	68.5
21.00	1534.6	1.9	0.1	20.9	2.6	26.7	9.9	310.9	0.0	3.7	1.1	1.1	0.3	0.9	1914.7	68.3
22.00	1534.6	1.9	0.1	20.9	2.6	26.7	9.9	310.9	0.0	3.7	1.1	1.1	0.3	0.9	1914.7	68.3
23.00	1534.6	1.9	0.1	20.9	2.6	26.7	9.9	310.9	0.0	3.7	1.1	1.1	0.3	0.9	1914.7	68.3
24.00	1534.6	1.9	0.1	20.9	2.6	26.7	9.9	310.9	0.0	3.7	1.1	1.1	0.3	0.9	1914.7	68.3
25.00	1534.6	1.9	0.1	20.9	2.6	26.7	9.9	310.9	0.0	3.7	1.1	1.1	0.3	0.9	1914.7	68.3
26.00	1374.8	1.7	0.1	18.8	2.3	24.0	8.8	278.5	0.0	3.3	1.0	1.0	0.3	0.8	1715.5	61.2
27.00	1374.8	1.7	0.1	18.8	2.3	24.0	8.8	278.5	0.0	3.3	1.0	1.0	0.3	0.8	1715.5	61.2
28.00	1374.8	1.7	0.1	18.8	2.3	24.0	8.8	278.5	0.0	3.3	1.0	1.0	0.3	0.8	1715.5	61.2
29.00	1374.8	1.7	0.1	18.8	2.3	24.0	8.8	278.5	0.0	3.3	1.0	1.0	0.3	0.8	1715.5	61.2
30.00	1374.8	1.7	0.1	18.8	2.3	24.0	8.8	278.5	0.0	3.3	1.0	1.0	0.3	0.8	1715.5	61.2
30.00	1388.0	1.6	0.0	14.6	1.3	35.4	7.0	283.3	0.1	3.1	0.8	0.6	0.1	0.0	1735.9	40.8
30.00	1397.0	1.5	0.0	8.2	0.5	51.3	4.2	287.8	0.0	2.3	0.4	0.2	0.0	0.1	1753.5	20.4

SSCR-3
MEU5(U,TH)-RUF RECYCLED FUEL

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	65.6	65.0
ANNUAL EQUILIBRIUM	22.1	21.5
30 YR CUMULATIVE	577.5	563.6
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	153.0
ANNUAL EQUILIBRIUM	0.0	61.4
30 YR CUMULATIVE	0.0	1546.5
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	204.6
ANNUAL EQUILIBRIUM	0.0	88.5
30 YR CUMULATIVE	0.0	2204.1
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	1158.8	1132.9
ANNUAL EQUILIBRIUM	375.1	363.9
30 YR CUMULATIVE	9428.7	9404.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	1601.0	926.0
ANNUAL EQUILIBRIUM	531.0	211.7
30 YR CUMULATIVE	13982.3	5653.8

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

SSCR-3
MEU5(U,TH)-RUF RECYCLED FUEL
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	14517.3	0.0	0.1	221.9	18.5	473.3	59.6	3110.0	0.0	0.0	0.0	0.0	0.0	0.0	18400.7	0.0
4.00	15384.8	0.0	0.1	325.1	36.1	547.4	116.2	4095.1	0.0	0.0	0.0	0.0	0.0	0.0	20504.8	0.0
5.00	20269.4	0.0	0.1	356.6	46.1	630.6	164.4	5125.4	0.0	0.0	0.0	0.0	0.0	0.0	26592.6	0.0
6.00	21694.2	0.0	0.8	352.1	43.3	696.3	152.3	4810.9	0.0	0.0	0.0	0.0	0.0	0.0	27749.9	0.0
7.00	21694.2	0.0	0.8	352.1	43.3	696.3	152.3	4810.9	0.0	0.0	0.0	0.0	0.0	0.0	27749.9	0.0
8.00	22054.2	0.0	1.3	441.9	95.0	638.6	229.0	5053.5	0.0	0.0	0.0	0.0	0.0	0.0	28513.5	0.0
9.00	22054.2	0.0	1.3	441.9	95.0	638.6	229.0	5053.5	0.0	0.0	0.0	0.0	0.0	0.0	28513.5	0.0
10.00	22054.2	0.0	1.3	441.9	95.0	638.6	229.0	5053.5	0.0	0.0	0.0	0.0	0.0	0.0	28513.5	0.0
11.00	22054.2	0.0	1.3	441.9	95.0	638.6	229.0	5053.5	0.0	0.0	0.0	0.0	0.0	0.0	28513.5	0.0
12.00	22054.2	0.0	1.3	441.9	95.0	638.6	229.0	5053.5	0.0	0.0	0.0	0.0	0.0	0.0	28513.5	0.0
13.00	22345.2	0.0	1.5	458.6	136.4	665.7	285.6	5169.5	0.0	0.0	0.0	0.0	0.0	0.0	29062.5	0.0
14.00	22345.2	0.0	1.5	458.6	136.4	665.7	285.6	5169.5	0.0	0.0	0.0	0.0	0.0	0.0	29062.5	0.0
15.00	22345.2	0.0	1.5	458.6	136.4	665.7	285.6	5169.5	0.0	0.0	0.0	0.0	0.0	0.0	29062.5	0.0
16.00	22345.2	0.0	1.5	458.6	136.4	665.7	285.6	5169.5	0.0	0.0	0.0	0.0	0.0	0.0	29062.5	0.0
17.00	22345.2	0.0	1.5	458.6	136.4	665.7	285.6	5169.5	0.0	0.0	0.0	0.0	0.0	0.0	29062.5	0.0
18.00	22224.3	0.0	1.7	472.6	167.2	669.1	335.6	5195.6	0.0	0.0	0.0	0.0	0.0	0.0	29066.0	0.0
19.00	22224.3	0.0	1.7	472.6	167.2	669.1	335.6	5195.6	0.0	0.0	0.0	0.0	0.0	0.0	29066.0	0.0
20.00	22224.3	0.0	1.7	472.6	167.2	669.1	335.6	5195.6	0.0	0.0	0.0	0.0	0.0	0.0	29066.0	0.0
21.00	22224.3	0.0	1.7	472.6	167.2	669.1	335.6	5195.6	0.0	0.0	0.0	0.0	0.0	0.0	29066.0	0.0
22.00	22224.3	0.0	1.7	472.6	167.2	669.1	335.6	5195.6	0.0	0.0	0.0	0.0	0.0	0.0	29066.0	0.0
23.00	21992.2	0.0	1.7	486.7	202.5	672.4	396.8	5313.6	0.0	0.0	0.0	0.0	0.0	0.0	29065.9	0.0
24.00	21992.2	0.0	1.7	486.7	202.5	672.4	396.8	5313.6	0.0	0.0	0.0	0.0	0.0	0.0	29065.9	0.0
25.00	21992.2	0.0	1.7	486.7	202.5	672.4	396.8	5313.6	0.0	0.0	0.0	0.0	0.0	0.0	29065.9	0.0
26.00	21992.2	0.0	1.7	486.7	202.5	672.4	396.8	5313.6	0.0	0.0	0.0	0.0	0.0	0.0	29065.9	0.0
27.00	21992.2	0.0	1.7	486.7	202.5	672.4	396.8	5313.6	0.0	0.0	0.0	0.0	0.0	0.0	29065.9	0.0
28.00	21992.2	0.0	1.7	486.7	202.5	672.4	396.8	5313.6	0.0	0.0	0.0	0.0	0.0	0.0	29065.9	0.0
29.00	21992.2	0.0	1.7	486.7	202.5	672.4	396.8	5313.6	0.0	0.0	0.0	0.0	0.0	0.0	29065.9	0.0

SSCR-3
MEU5(U,TH)-RUF RECYCLED FUEL
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.00	14003.8	17.6	0.8	254.8	58.0	159.3	143.3	3044.2	4.9	35.7	11.2	10.5	3.2	15.6	17762.8	629.1
7.00	14763.4	18.6	0.8	268.6	61.1	167.9	151.1	3209.3	5.2	37.6	11.8	11.1	3.3	16.5	18726.3	663.2
8.00	19450.7	24.5	1.1	353.9	80.5	221.2	199.1	4228.2	6.8	49.5	15.5	14.6	4.4	21.7	24671.7	873.8
9.00	21119.0	26.5	1.2	384.2	87.5	240.2	216.1	4590.4	7.4	53.9	16.9	15.8	4.8	23.6	26787.5	953.6
10.00	21119.0	26.5	1.2	384.2	87.5	240.2	216.1	4590.4	7.4	53.9	16.9	15.8	4.8	23.6	26787.5	953.6
11.00	21477.7	26.5	1.5	416.0	130.0	235.5	277.3	4825.4	9.2	57.3	17.6	16.4	4.7	29.4	27524.5	962.9
12.00	21477.7	26.5	1.5	416.0	130.0	235.5	277.3	4825.4	9.2	57.3	17.6	16.4	4.7	29.4	27524.5	962.9
13.00	21477.7	26.5	1.5	416.0	130.0	235.5	277.3	4825.4	9.2	57.3	17.6	16.4	4.7	29.4	27524.5	962.9
14.00	21477.7	26.5	1.5	416.0	130.0	235.5	277.3	4825.4	9.2	57.3	17.6	16.4	4.7	29.4	27524.5	962.9
15.00	21477.7	26.5	1.5	416.0	130.0	235.5	277.3	4825.4	9.2	57.3	17.6	16.4	4.7	29.4	27524.5	962.9
16.00	21764.2	26.6	1.6	430.3	162.0	258.3	330.7	4938.2	10.5	59.5	18.1	16.9	4.9	33.7	28055.5	980.5
17.00	21764.2	26.6	1.6	430.3	162.0	258.3	330.7	4938.2	10.5	59.5	18.1	16.9	4.9	33.7	28055.5	980.5
18.00	21764.2	26.6	1.6	430.3	162.0	258.3	330.7	4938.2	10.5	59.5	18.1	16.9	4.9	33.7	28055.5	980.5
19.00	21764.2	26.6	1.6	430.3	162.0	258.3	330.7	4938.2	10.5	59.5	18.1	16.9	4.9	33.7	28055.5	980.5
20.00	21764.2	26.6	1.6	430.3	162.0	258.3	330.7	4938.2	10.5	59.5	18.1	16.9	4.9	33.7	28055.5	980.5
21.00	21656.2	26.1	1.7	432.4	185.4	266.8	376.6	4964.1	11.5	60.6	18.1	16.8	4.5	37.3	28058.1	994.8
22.00	21656.2	26.1	1.7	432.4	185.4	266.8	376.6	4964.1	11.5	60.6	18.1	16.8	4.5	37.3	28058.1	994.8
23.00	21656.2	26.1	1.7	432.4	185.4	266.8	376.6	4964.1	11.5	60.6	18.1	16.8	4.5	37.3	28058.1	994.8
24.00	21656.2	26.1	1.7	432.4	185.4	266.8	376.6	4964.1	11.5	60.6	18.1	16.8	4.5	37.3	28058.1	994.8
25.00	21656.2	26.1	1.7	432.4	185.4	266.8	376.6	4964.1	11.5	60.6	18.1	16.8	4.5	37.3	28058.1	994.8
26.00	21584.0	25.9	1.7	442.5	214.8	281.3	435.2	5116.6	12.7	62.8	18.5	17.2	4.6	41.4	28259.2	1000.8
27.00	21584.0	25.9	1.7	442.5	214.8	281.3	435.2	5116.6	12.7	62.8	18.5	17.2	4.6	41.4	28259.2	1000.8
28.00	21584.0	25.9	1.7	442.5	214.8	281.3	435.2	5116.6	12.7	62.8	18.5	17.2	4.6	41.4	28259.2	1000.8
29.00	21584.0	25.9	1.7	442.5	214.8	281.3	435.2	5116.6	12.7	62.8	18.5	17.2	4.6	41.4	28259.2	1000.8
30.00	21584.0	25.9	1.7	442.5	214.8	281.3	435.2	5116.6	12.7	62.8	18.5	17.2	4.6	41.4	28259.2	1000.8
30.00	21786.5	24.6	1.7	451.5	211.6	378.2	431.9	5199.6	6.0	57.2	13.6	10.6	1.7	29.4	28604.1	666.6
30.00	21974.5	23.5	1.7	459.5	208.0	507.3	420.7	5277.9	1.5	41.9	6.3	3.0	0.2	15.3	28941.4	333.8

SSCR-3
MEU5(U,TH)-RUF RECYCLE TOPPING

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	231.4	0.0
ANNUAL EQUILIBRIUM	78.2	0.0
30 YR CUMULATIVE	1866.4	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	231.4	0.0
ANNUAL EQUILIBRIUM	78.2	0.0
30 YR CUMULATIVE	1866.2	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	912.6	0.0
ANNUAL EQUILIBRIUM	308.3	0.0
30 YR CUMULATIVE	7359.3	0.0

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

SSCR-3
MEU5(U,TH)-RUF RECYCLE TOPPING
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.00	0.0	0.0	0.0	0.0	1.5	113.7	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	122.3	0.0
5.00	0.0	0.0	0.0	0.0	2.2	174.7	0.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	187.8	0.0
6.00	0.0	0.0	0.0	0.0	3.7	284.1	0.0	17.7	0.0	0.0	0.0	0.0	0.0	0.0	305.5	0.0
7.00	0.0	0.0	0.0	0.0	3.7	284.1	0.0	17.7	0.0	0.0	0.0	0.0	0.0	0.0	305.5	0.0
8.00	0.0	0.0	0.0	0.0	4.6	358.2	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0	385.1	0.0
9.00	0.0	0.0	0.0	0.0	4.6	358.2	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0	385.1	0.0
10.00	0.0	0.0	0.0	0.0	4.6	358.2	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0	385.1	0.0
11.00	0.0	0.0	0.0	0.0	4.6	358.2	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0	385.1	0.0
12.00	0.0	0.0	0.0	0.0	4.6	358.2	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0	385.1	0.0
13.00	0.0	0.0	0.0	0.0	5.2	400.0	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0	430.1	0.0
14.00	0.0	0.0	0.0	0.0	5.2	400.0	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0	430.1	0.0
15.00	0.0	0.0	0.0	0.0	5.2	400.0	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0	430.1	0.0
16.00	0.0	0.0	0.0	0.0	5.2	400.0	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0	430.1	0.0
17.00	0.0	0.0	0.0	0.0	5.2	400.0	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0	430.1	0.0
18.00	0.0	0.0	0.0	0.0	5.0	388.4	0.0	24.2	0.0	0.0	0.0	0.0	0.0	0.0	417.6	0.0
19.00	0.0	0.0	0.0	0.0	5.0	388.4	0.0	24.2	0.0	0.0	0.0	0.0	0.0	0.0	417.6	0.0
20.00	0.0	0.0	0.0	0.0	5.0	388.4	0.0	24.2	0.0	0.0	0.0	0.0	0.0	0.0	417.6	0.0
21.00	0.0	0.0	0.0	0.0	5.0	388.4	0.0	24.2	0.0	0.0	0.0	0.0	0.0	0.0	417.6	0.0
22.00	0.0	0.0	0.0	0.0	5.0	388.4	0.0	24.2	0.0	0.0	0.0	0.0	0.0	0.0	417.6	0.0
23.00	0.0	0.0	0.0	0.0	4.9	383.3	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	412.1	0.0
24.00	0.0	0.0	0.0	0.0	4.9	383.3	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	412.1	0.0
25.00	0.0	0.0	0.0	0.0	4.9	383.3	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	412.1	0.0
26.00	0.0	0.0	0.0	0.0	4.9	383.3	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	412.1	0.0
27.00	0.0	0.0	0.0	0.0	4.9	383.3	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	412.1	0.0
28.00	0.0	0.0	0.0	0.0	4.9	383.3	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	412.1	0.0
29.00	0.0	0.0	0.0	0.0	4.9	383.3	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	412.1	0.0

SSCR-4
MEU3(U,TH)-RUF

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	74.8	72.9
FINAL CORE	68.8	67.6
ANNUAL EQUILIBRIUM	23.0	22.4
30 YR CUMULATIVE	744.5	725.0
U308 REQUIREMENTS (ST/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	*******	*******
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	******	******
FINAL CORE	******	******
ANNUAL EQUILIBRIUM	******	******
30 YR CUMULATIVE	********	********
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	160.1
FINAL CORE	0.0	182.6
ANNUAL EQUILIBRIUM	0.0	75.1
30 YR CUMULATIVE	0.0	2252.0
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	0.0	210.0
FINAL CORE	0.0	231.6
ANNUAL EQUILIBRIUM	0.0	100.1
30 YR CUMULATIVE	0.0	2988.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	1703.7	1319.5
FINAL CORE	2146.7	1617.9
ANNUAL EQUILIBRIUM	715.6	476.6
30 YR CUMULATIVE	22341.4	15162.7
URANIUM-235 (KG/GWE)		
INITIAL CORE	46.1	59.8
FINAL CORE	228.3	234.2
ANNUAL EQUILIBRIUM	68.6	73.2
30 YR CUMULATIVE	1631.3	1855.5

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

SSCR-4
MEU3(U,TH)-RUF
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	25996.3	40.9	0.2	496.0	80.7	16.8	2.0	4021.2	0.1	37.9	9.4	5.7	0.9	0.8	30708.9	341.3
2.00	24124.6	33.9	0.5	531.4	125.8	26.2	4.5	5332.0	0.5	55.7	17.8	14.8	4.0	1.9	30273.5	639.2
3.00	23150.8	31.4	1.5	529.0	148.1	32.3	6.4	5974.5	0.6	66.9	22.5	20.7	7.2	1.3	29993.2	1066.8
4.00	22585.5	31.3	1.1	549.6	155.4	34.1	6.7	6468.7	0.6	70.3	24.2	21.5	7.0	1.3	29957.3	1066.8
5.00	22807.0	30.6	1.1	543.0	149.7	35.6	6.9	6281.4	0.6	68.2	23.1	20.6	6.8	1.3	29975.9	1066.8
6.00	22798.2	30.0	2.0	556.7	221.4	54.4	15.4	6179.9	1.0	69.2	22.1	19.8	6.2	2.7	29979.0	1064.1
7.00	22798.2	30.0	2.0	556.7	221.4	54.4	15.4	6179.9	1.0	69.2	22.1	19.8	6.2	2.7	29979.0	1064.1
8.00	22798.2	30.0	2.0	556.7	221.4	54.4	15.4	6179.9	1.0	69.2	22.1	19.8	6.2	2.7	29979.0	1064.1
9.00	22798.2	30.0	2.0	556.7	221.4	54.4	15.4	6179.9	1.0	69.2	22.1	19.8	6.2	2.7	29979.0	1064.1
10.00	22798.2	30.0	2.0	556.7	221.4	54.4	15.4	6179.9	1.0	69.2	22.1	19.8	6.2	2.7	29979.0	1064.1
11.00	22671.8	29.2	2.0	559.9	276.0	70.4	25.7	6217.5	1.6	71.1	22.9	20.7	6.2	4.4	29979.4	1061.8
12.00	22671.8	29.2	2.0	559.9	276.0	70.4	25.7	6217.5	1.6	71.1	22.9	20.7	6.2	4.4	29979.4	1061.8
13.00	22671.8	29.2	2.0	559.9	276.0	70.4	25.7	6217.5	1.6	71.1	22.9	20.7	6.2	4.4	29979.4	1061.8
14.00	22671.8	29.2	2.0	559.9	276.0	70.4	25.7	6217.5	1.6	71.1	22.9	20.7	6.2	4.4	29979.4	1061.8
15.00	22671.8	29.2	2.0	559.9	276.0	70.4	25.7	6217.5	1.6	71.1	22.9	20.7	6.2	4.4	29979.4	1061.8
16.00	22572.5	28.7	1.9	562.8	318.0	82.8	36.3	6246.9	2.1	72.6	22.9	20.7	6.0	6.2	29980.4	1060.4
17.00	22572.5	28.7	1.9	562.8	318.0	82.8	36.3	6246.9	2.1	72.6	22.9	20.7	6.0	6.2	29980.4	1060.4
18.00	22572.5	28.7	1.9	562.8	318.0	82.8	36.3	6246.9	2.1	72.6	22.9	20.7	6.0	6.2	29980.4	1060.4
19.00	22572.5	28.7	1.9	562.8	318.0	82.8	36.3	6246.9	2.1	72.6	22.9	20.7	6.0	6.2	29980.4	1060.4
20.00	22572.5	28.7	1.9	562.8	318.0	82.8	36.3	6246.9	2.1	72.6	22.9	20.7	6.0	6.2	29980.4	1060.4
21.00	22486.8	28.4	1.9	572.1	350.2	92.2	46.7	6269.8	2.6	73.7	23.0	20.9	5.9	7.8	29982.0	1059.3
22.00	22486.8	28.4	1.9	572.1	350.2	92.2	46.7	6269.8	2.6	73.7	23.0	20.9	5.9	7.8	29982.0	1059.3
23.00	22486.8	28.4	1.9	572.1	350.2	92.2	46.7	6269.8	2.6	73.7	23.0	20.9	5.9	7.8	29982.0	1059.3
24.00	22486.8	28.4	1.9	572.1	350.2	92.2	46.7	6269.8	2.6	73.7	23.0	20.9	5.9	7.8	29982.0	1059.3
25.00	22486.8	28.4	1.9	572.1	350.2	92.2	46.7	6269.8	2.6	73.7	23.0	20.9	5.9	7.8	29982.0	1059.3
26.00	22425.4	28.1	1.9	574.5	376.2	99.7	56.5	6283.6	3.1	74.5	23.0	20.9	5.8	9.2	29982.5	1058.3
27.00	22425.4	28.1	1.9	574.5	376.2	99.7	56.5	6283.6	3.1	74.5	23.0	20.9	5.8	9.2	29982.5	1058.3
28.00	22425.4	28.1	1.9	574.5	376.2	99.7	56.5	6283.6	3.1	74.5	23.0	20.9	5.8	9.2	29982.5	1058.3
29.00	22425.4	28.1	1.9	574.5	376.2	99.7	56.5	6283.6	3.1	74.5	23.0	20.9	5.8	9.2	29982.5	1058.3
30.00	22425.4	28.1	1.9	574.5	376.2	99.7	56.5	6283.6	3.1	74.5	23.0	20.9	5.8	9.2	29982.5	1058.3
30.00	22649.4	27.1	2.0	643.1	379.3	98.5	53.2	6386.0	1.4	67.5	17.2	13.2	2.3	6.5	30346.7	706.0
30.00	22859.8	26.5	2.0	739.2	378.9	96.9	49.8	6483.3	0.4	49.9	8.2	4.1	0.3	3.4	30702.6	353.4

SSCR-4
MEU3(U,TH)-RUF
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	75170.0	0.0	6.2	2146.6	173.6	58.1	1.1	15983.3	0.0	0.0	0.0	0.0	0.0	0.0	93538.6	0.0
1.00	23261.1	0.0	2.0	910.5	73.6	24.7	0.5	6780.3	0.0	0.0	0.0	0.0	0.0	0.0	31052.7	0.0
2.00	23426.7	0.0	2.0	891.0	72.1	24.1	0.4	6634.4	0.0	0.0	0.0	0.0	0.0	0.0	31050.8	0.0
3.00	23059.0	0.0	2.0	887.5	115.7	27.7	2.3	6963.8	0.0	0.0	0.0	0.0	0.0	0.0	31058.1	0.0
4.00	23470.1	0.0	2.0	889.6	171.0	38.9	6.7	6472.7	0.0	0.0	0.0	0.0	0.0	0.0	31051.0	0.0
5.00	23470.1	0.0	2.0	889.6	171.0	38.9	6.7	6472.7	0.0	0.0	0.0	0.0	0.0	0.0	31051.0	0.0
6.00	23470.1	0.0	2.0	889.6	171.0	38.9	6.7	6472.7	0.0	0.0	0.0	0.0	0.0	0.0	31051.0	0.0
7.00	23470.1	0.0	2.0	889.6	171.0	38.9	6.7	6472.7	0.0	0.0	0.0	0.0	0.0	0.0	31051.0	0.0
8.00	23327.9	0.0	2.0	891.6	243.8	58.3	15.4	6510.9	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
9.00	23327.9	0.0	2.0	891.6	243.8	58.3	15.4	6510.9	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
10.00	23327.9	0.0	2.0	891.6	243.8	58.3	15.4	6510.9	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
11.00	23327.9	0.0	2.0	891.6	243.8	58.3	15.4	6510.9	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
12.00	23327.9	0.0	2.0	891.6	243.8	58.3	15.4	6510.9	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
13.00	23214.3	0.0	2.0	895.8	298.7	74.1	25.4	6539.7	0.0	0.0	0.0	0.0	0.0	0.0	31050.0	0.0
14.00	23214.3	0.0	2.0	895.8	298.7	74.1	25.4	6539.7	0.0	0.0	0.0	0.0	0.0	0.0	31050.0	0.0
15.00	23214.3	0.0	2.0	895.8	298.7	74.1	25.4	6539.7	0.0	0.0	0.0	0.0	0.0	0.0	31050.0	0.0
16.00	23214.3	0.0	2.0	895.8	298.7	74.1	25.4	6539.7	0.0	0.0	0.0	0.0	0.0	0.0	31050.0	0.0
17.00	23214.3	0.0	2.0	895.8	298.7	74.1	25.4	6539.7	0.0	0.0	0.0	0.0	0.0	0.0	31050.0	0.0
18.00	23123.2	0.0	2.0	901.6	339.6	86.4	35.9	6561.2	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
19.00	23123.2	0.0	2.0	901.6	339.6	86.4	35.9	6561.2	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
20.00	23123.2	0.0	2.0	901.6	339.6	86.4	35.9	6561.2	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
21.00	23123.2	0.0	2.0	901.6	339.6	86.4	35.9	6561.2	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
22.00	23123.2	0.0	2.0	901.6	339.6	86.4	35.9	6561.2	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
23.00	23056.6	0.0	2.0	901.6	372.9	95.9	46.2	6574.7	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
24.00	23056.6	0.0	2.0	901.6	372.9	95.9	46.2	6574.7	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
25.00	23056.6	0.0	2.0	901.6	372.9	95.9	46.2	6574.7	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
26.00	23056.6	0.0	2.0	901.6	372.9	95.9	46.2	6574.7	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
27.00	23056.6	0.0	2.0	901.6	372.9	95.9	46.2	6574.7	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
28.00	23056.6	0.0	2.0	901.6	372.9	95.9	46.2	6574.7	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0
29.00	23056.6	0.0	2.0	901.6	372.9	95.9	46.2	6574.7	0.0	0.0	0.0	0.0	0.0	0.0	31049.9	0.0

SSCR-5
PLUTONIUM/THORIUM

	CHARGE	DISCHARGE
THO2 REQUIREMENTS (ST/GWE)		
INITIAL CORE	88.7	86.9
FINAL CORE	81.4	80.3
ANNUAL EQUILIBRIUM	27.4	26.9
30 YR CUMULATIVE	894.5	877.0
U3O8 REQUIREMENTS (ST/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
SWU REQUIREMENTS (MT SWU/GWE)		
INITIAL CORE	0.0	0.0
FINAL CORE	0.0	0.0
ANNUAL EQUILIBRIUM	0.0	0.0
30 YR CUMULATIVE	0.0	0.0
FISSILE PLUTONIUM (KG/GWE)		
INITIAL CORE	2409.5	967.5
FINAL CORE	4650.2	3209.7
ANNUAL EQUILIBRIUM	1483.9	790.1
30 YR CUMULATIVE	42253.4	21607.9
TOTAL PLUTONIUM (KG/GWE)		
INITIAL CORE	3409.7	1898.6
FINAL CORE	8999.7	7236.3
ANNUAL EQUILIBRIUM	2792.4	1930.1
30 YR CUMULATIVE	75052.6	50430.4
URANIUM-233 (KG/GWE)		
INITIAL CORE	0.0	747.9
FINAL CORE	0.0	606.1
ANNUAL EQUILIBRIUM	0.0	286.5
30 YR CUMULATIVE	0.0	8965.4
URANIUM-235 (KG/GWE)		
INITIAL CORE	0.0	8.2
FINAL CORE	0.0	4.5
ANNUAL EQUILIBRIUM	0.0	3.2
30 YR CUMULATIVE	0.0	105.3

NUMBER OF BATCHES	3
REFUELING INTERVAL (YRS)	1.00
POWER (GWE)	1.260
CAPACITY FACTOR	0.750
BURNUP (MWD/MT)	33400.0
THERMAL EFFICIENCY	0.334

EQUILIBRIUM CYCLE IS THE BATCH LOADED IN YEAR 21.00

SSCR-5
PLUTONIUM/THORIUM
CHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
0.0	89211.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2475.7	1038.9	560.3	221.3	0.0	93507.1	0.0
1.00	29156.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1082.3	454.2	244.9	96.7	0.0	31034.1	0.0
2.00	29379.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	953.3	400.1	215.7	85.2	0.0	31033.3	0.0
3.00	28587.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1083.1	737.5	432.5	205.4	0.0	31045.6	0.0
4.00	28587.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1083.1	737.5	432.5	205.4	0.0	31045.6	0.0
5.00	28587.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1083.1	737.5	432.5	205.4	0.0	31045.6	0.0
6.00	28587.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1083.1	737.5	432.5	205.4	0.0	31045.6	0.0
7.00	28587.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1083.1	737.5	432.5	205.4	0.0	31045.6	0.0
8.00	28188.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1151.5	912.9	494.0	300.2	0.0	31047.4	0.0
9.00	28188.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1151.5	912.9	494.0	300.2	0.0	31047.4	0.0
10.00	28188.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1151.5	912.9	494.0	300.2	0.0	31047.4	0.0
11.00	28188.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1151.5	912.9	494.0	300.2	0.0	31047.4	0.0
12.00	28188.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1151.5	912.9	494.0	300.2	0.0	31047.4	0.0
13.00	27828.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1231.3	1065.8	545.0	378.1	0.0	31049.1	0.0
14.00	27828.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1231.3	1065.8	545.0	378.1	0.0	31049.1	0.0
15.00	27828.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1231.3	1065.8	545.0	378.1	0.0	31049.1	0.0
16.00	27828.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1231.3	1065.8	545.0	378.1	0.0	31049.1	0.0
17.00	27828.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1231.3	1065.8	545.0	378.1	0.0	31049.1	0.0
18.00	27531.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1285.5	1207.8	584.3	440.9	0.0	31050.3	0.0
19.00	27531.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1285.5	1207.8	584.3	440.9	0.0	31050.3	0.0
20.00	27531.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1285.5	1207.8	584.3	440.9	0.0	31050.3	0.0
21.00	27531.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1285.5	1207.8	584.3	440.9	0.0	31050.3	0.0
22.00	27531.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1285.5	1207.8	584.3	440.9	0.0	31050.3	0.0
23.00	27271.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1338.2	1334.2	614.9	492.6	0.0	31051.4	0.0
24.00	27271.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1338.2	1334.2	614.9	492.6	0.0	31051.4	0.0
25.00	27271.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1338.2	1334.2	614.9	492.6	0.0	31051.4	0.0
26.00	27271.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1338.2	1334.2	614.9	492.6	0.0	31051.4	0.0
27.00	27271.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1338.2	1334.2	614.9	492.6	0.0	31051.4	0.0
28.00	27271.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1338.2	1334.2	614.9	492.6	0.0	31051.4	0.0
29.00	27271.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1338.2	1334.2	614.9	492.6	0.0	31051.4	0.0

SSCR-5
PLUTONIUM/THORIUM
DISCHARGE DATA BY YEAR
(IN KG)

YEAR	TH-232	PA-233	U-232	U-233	U-234	U-235	U-236	U-238	PU-238	PU-239	PU-240	PU-241	PU-242	NP-237	TOTAL HEAVY METAL	FISSION PRODUCT
1.00	29777.0	32.4	0.2	184.2	13.0	1.0	0.0	0.0	0.4	233.1	222.8	141.3	63.8	0.0	30669.2	346.7
2.00	29176.6	31.7	0.5	307.9	28.7	3.8	0.2	0.0	2.3	171.7	263.3	176.8	96.2	0.0	30259.7	697.6
3.00	28465.8	27.4	0.7	358.8	34.9	5.5	0.3	0.0	6.5	252.6	387.4	243.5	130.5	0.0	29913.9	1048.7
4.00	28465.8	27.4	0.7	358.8	34.9	5.5	0.3	0.0	6.5	252.6	387.4	243.5	130.5	0.0	29913.9	1048.7
5.00	28465.8	27.4	0.7	358.8	34.9	5.5	0.3	0.0	6.5	252.6	387.4	243.5	130.5	0.0	29913.9	1048.7
6.00	28005.1	25.6	0.6	353.4	32.2	5.0	0.2	0.0	6.6	310.2	566.4	341.3	228.0	0.0	29874.6	1049.4
7.00	28005.1	25.6	0.6	353.4	32.2	5.0	0.2	0.0	6.6	310.2	566.4	341.3	228.0	0.0	29874.6	1049.4
8.00	28005.1	25.6	0.6	353.4	32.2	5.0	0.2	0.0	6.6	310.2	566.4	341.3	228.0	0.0	29874.6	1049.4
9.00	28005.1	25.6	0.6	353.4	32.2	5.0	0.2	0.0	6.6	310.2	566.4	341.3	228.0	0.0	29874.6	1049.4
10.00	28005.1	25.6	0.6	353.4	32.2	5.0	0.2	0.0	6.6	310.2	566.4	341.3	228.0	0.0	29874.6	1049.4
11.00	27628.0	24.4	0.5	348.4	30.2	4.7	0.2	0.0	10.4	387.7	718.2	396.8	305.8	0.0	29855.3	1049.5
12.00	27628.0	24.4	0.5	348.4	30.2	4.7	0.2	0.0	10.4	387.7	718.2	396.8	305.8	0.0	29855.3	1049.5
13.00	27628.0	24.4	0.5	348.4	30.2	4.7	0.2	0.0	10.4	387.7	718.2	396.8	305.8	0.0	29855.3	1049.5
14.00	27628.0	24.4	0.5	348.4	30.2	4.7	0.2	0.0	10.4	387.7	718.2	396.8	305.8	0.0	29855.3	1049.5
15.00	27628.0	24.4	0.5	348.4	30.2	4.7	0.2	0.0	10.4	387.7	718.2	396.8	305.8	0.0	29855.3	1049.5
16.00	27290.9	23.2	0.5	342.4	28.0	4.3	0.2	0.0	11.1	457.5	868.1	444.8	370.6	0.0	29841.5	1049.6
17.00	27290.9	23.2	0.5	342.4	28.0	4.3	0.2	0.0	11.1	457.5	868.1	444.8	370.6	0.0	29841.5	1049.6
18.00	27290.9	23.2	0.5	342.4	28.0	4.3	0.2	0.0	11.1	457.5	868.1	444.8	370.6	0.0	29841.5	1049.6
19.00	27290.9	23.2	0.5	342.4	28.0	4.3	0.2	0.0	11.1	457.5	868.1	444.8	370.6	0.0	29841.5	1049.6
20.00	27290.9	23.2	0.5	342.4	28.0	4.3	0.2	0.0	11.1	457.5	868.1	444.8	370.6	0.0	29841.5	1049.6
21.00	27006.4	22.6	0.4	338.4	26.9	4.1	0.2	0.0	11.6	514.2	1000.2	481.3	424.7	0.0	29830.8	1049.7
22.00	27006.4	22.6	0.4	338.4	26.9	4.1	0.2	0.0	11.6	514.2	1000.2	481.3	424.7	0.0	29830.8	1049.7
23.00	27006.4	22.6	0.4	338.4	26.9	4.1	0.2	0.0	11.6	514.2	1000.2	481.3	424.7	0.0	29830.8	1049.7
24.00	27006.4	22.6	0.4	338.4	26.9	4.1	0.2	0.0	11.6	514.2	1000.2	481.3	424.7	0.0	29830.8	1049.7
25.00	27006.4	22.6	0.4	338.4	26.9	4.1	0.2	0.0	11.6	514.2	1000.2	481.3	424.7	0.0	29830.8	1049.7
26.00	26757.6	22.0	0.4	334.4	25.8	3.9	0.1	0.0	11.9	565.3	1121.9	510.1	469.3	0.0	29822.8	1049.7
27.00	26757.6	22.0	0.4	334.4	25.8	3.9	0.1	0.0	11.9	565.3	1121.9	510.1	469.3	0.0	29822.8	1049.7
28.00	26757.6	22.0	0.4	334.4	25.8	3.9	0.1	0.0	11.9	565.3	1121.9	510.1	469.3	0.0	29822.8	1049.7
29.00	26757.6	22.0	0.4	334.4	25.8	3.9	0.1	0.0	11.9	565.3	1121.9	510.1	469.3	0.0	29822.8	1049.7
30.00	26757.6	22.0	0.4	334.4	25.8	3.9	0.1	0.0	11.9	565.3	1121.9	510.1	469.3	0.0	29822.8	1049.7
30.00	26914.9	21.3	0.2	240.9	14.3	1.5	0.0	0.0	5.0	788.7	1214.4	549.9	478.7	0.0	30229.6	698.6
30.00	27085.7	20.9	0.0	124.1	5.2	0.3	0.0	0.0	0.9	1045.4	1285.0	584.8	486.5	0.0	30639.1	348.7

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