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Evaluation of Activation Products in Remaining K-, L- and C-Reactor Structures

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1.0 EXECUTIVE SUMMARY

An analytic model and calculational methodology was previously developed for P-reactor and R-reactor[1] to quantify the radioisotopes present in Savannah River Site (SRS) reactor tanks and the surrounding structural materials as a result of neutron activation of the materials during reactor operation. That methodology has been extended to K-reactor, L-reactor, and C-reactor. The analysis was performed to provide a best-estimate source term input to the Performance Assessment for an in-situ disposition strategy by Area Completion Projects-Deactivation and Decommissioning (ACP-D&D).

The reactor structure model developed earlier for the P-reactor and R-reactor analyses was also used for the K-reactor and L-reactor. The model was suitably modified to handle the larger C-reactor tank and associated structures. For all reactors, the structure model consisted of 3 annular zones, homogenized by the amount of structural materials in the zone, and 5 horizontal layers. The curie content on an individual radioisotope basis and total basis for each of the regions was determined. A summary of these results are provided herein. The efficacy of this methodology to accurately predict the radioisotopic content of the reactor systems in question has been demonstrated and is documented in Reference 1. As noted in that report, results for one reactor facility cannot be directly extrapolated to other SRS reactors.

2.0 INTRODUCTION

The Savannah River Site began operation in the mid 1950's with the mission of producing special nuclear materials in a safe, efficient, and environmentally acceptable manner. The special nuclear materials were produced primarily for national defense in five nuclear materials production reactors. The production reactors considered in the current analysis are K-reactor, L-reactor and C-reactor. The operation histories for these reactors by year and by month are presented in Tables 1 - 6.

K-reactor was initially brought critical on October 14, 1954 and operated intermittently until April 10, 1988. After making extensive modifications to the reactor's safety bases documentation and some system modifications, it was restarted on June 8, 1992. A series of low power tests were performed over seven weeks after which the reactor was permanently shutdown on July 30, 1992. The reactor operated at powers ranging from around 300 MW to a maximum of 2731 MW during this time and had achieved more than 16.7 million megawatt-days during its operating life. Tables 1 & 3 provide a history of the operating powers for K-reactor by year and by month, respectively.

L-reactor was initially brought critical on August 11, 1954 and operated intermittently until February 18, 1968 when it was placed on standby status. It had operated at powers ranging from around 300 MW to a maximum of 2634 MW. After refurbishment the reactor was restarted on October 31, 1985, and it operated intermittently until its final shutdown on June 23, 1988. Its operating powers over this 32-month period ranged from around 1000 MW to a maximum of 2702 MW. Over its lifetime, it achieved more than eight million megawatt-days. Tables 2 & 5 provide a history of the operating powers for L-reactor by year and by month, respectively.

C-reactor was initially brought critical on March 28, 1955 and operated intermittently until June 21, 1985 when it was temporarily shutdown to repair cracks in the reactor vessel. It was later determined that the proposed repairs would not meet technical standards, so the repair program was abandoned and the reactor remained shutdown. The reactor operated at powers ranging from

around 600 MW to a maximum of 2913 MW and had achieved more than 17.3 million megawatt-days during its operating life. Tables 3 & 6 provide a history of the operating powers for C-reactor by year and by month, respectively.

Operation of the reactors resulted in activation of their tank internals, tank, and surrounding structural materials. This report describes the systematic approach to provide a present account of the remaining radioisotopes in the materials of the structures of K-reactor, L-reactor and C-reactor.

3.0 QUALITY

The work described in the current report includes task activities that are described by task technical request Q-TTR-P-00001.[2] As task activities, all calculations performed in the completion of the tasks associated with this task technical request are subject to the applicable requirements of the Site E7 manual that included those for technical report, engineering calculations and technical reviews. Computer programs used in the completion of this work are qualified as GS level software in accordance with the SRS quality assurance manual.[3]

Industry standard computational tools, MCNP5[4] and ORIGEN-S/SCALE6[5], are used to develop estimations of neutron flux and fluence, and consequential material activation within various components of the reactor system. MCNP5 is a general-purpose Monte Carlo code that can be used for neutron, photon, electron, or coupled transport, including the capability to calculate eigenvalues for critical systems. The code uses pointwise cross-section data (such as ENDF/B-VI) to account for all reactions given in a particular cross-section evaluation. MCNP5 is used to calculate the effective multiplication factor of the reactor system for determining optimal control position for particular simulations and to estimate the position-dependent neutron flux and fluence in the reactor system.

ORIGEN-S is an industry standard depletion and decay simulation tool that computes time-dependent concentrations and radiation source terms of isotopes, which are simultaneously generated or depleted through neutronic transmutation, fission, and radioactive decay. ORIGEN-S is capable of utilizing a three-group flux from MCNP5 with composition and other problem-specific information to generate flux weighted neutron cross-sections based upon any standard ENDF/B formatted nuclear data library. ORIGEN-S is used to simulate the activation of non-fissile structural and engineered components in the reactor facility.

4.0 CALCULATIONAL APPROACH AND METHODOLOGY

4.1 Assumptions Used in the Current Analysis

The total reactor structural material system for each reactor is assumed to be those materials that are within the biological shield of the reactor, including the shield itself. This includes reactor internals still present in the reactor, the stainless steel reactor tank, and the thermal and biological shields. Also, included are the upper and lower shield plates, the upper and lower plenum, and raschig rings. For the purpose of the present analysis, the system has been subdivided into several homogenized regions as presented in Figures 1 - 6. These homogenized regions have been developed in a joint effort between SRNL and ACP-D&D personnel to simplify the model detail while maintaining computational accuracy. These regions are developed to group similar types of materials and relative positions within the reactor system. The composition of the homogenized material zones are provided by ACP-D&D[6] and are presented in Tables 7 - 14. These material compositions were generated by considering the composition of each physical

material located within each zone, estimating its relative contribution, by weight, to the total mass of the region, and calculating the final elemental composition and density of the final homogenized material region. In addition, these tables of homogenized materials do not include non-permanent fuel, target, and control materials, and transitory liquids and gases present when the reactor was operating. The non-permanent materials are not the constituents of the existing shutdown reactor system. Therefore, these transitory materials were considered only in the flux calculations, but were not included in the calculations of the current isotopic activation product inventory. Table 7 provides the composition of 304 stainless steel used in the analysis to represent the reactor tank and the composition of Al6063 used in the analysis to represent the individual aluminum components simulated within the reactor core (e.g., USHs, Septifoils, thimbles, etc.). Region 4H3V in the figures represents the reactor core including the tank walls and is modeled explicitly in this task.

The boehmite surface deposits listed in Table 7 represents assumed debris deposits of metals and oxides on the surfaces of the tank wall and internal components. The assumed composition and thickness of the surface deposits are the same for both the tank wall and the internals.[6]

Average flux values through a particular region are used when calculating activation product production in the region. Though the flux profile and fluence change as the neutrons traverse a given region, the average flux applied over the entire region is expected to provide a slightly conservative estimation of activation product formation. The conservatism is caused by ignoring the potential depletion of some isotopes in volumes within the region that experience a higher neutron flux than the average.

4.2 Determination of the Flux Profiles and Fluence

In order to estimate the radionuclide activity produced by neutron activation of structural components in the reactor tank and the thermal and biological shields, the neutron fluence and energy spectra the various components were exposed to must first be determined. The MCNP5[4] code analysis of specific core configurations along with individual reactor irradiation histories are being used to determine the three-group flux and fluence in each region.

The operational records of the individual reactors are reasonably intact. The energy (MWD) generated by month for each reactor is available. The average and maximum reactor power (MW) for each month is also generally known. That data establishes the neutron production history. The production and subsequent thermalization, absorption, and transport of those neutrons to the various in-tank and ex-tank regions can be estimated using a physics code such as MCNP for a specific set of core fuel and target geometry and contents.

The SRS reactors irradiated dozens of different fuel and target assemblies in many different core configurations. Each individual fuel cycle (called a charge) represented, in effect, a unique core arrangement. It is not practical to analyze and track activation for each separate charge configuration. Representative core configurations were analyzed in detail to determine the neutron flux profiles for the three energy groups. The operational history varies significantly between reactors, so the three reactors were necessarily evaluated individually. The representative core configurations, or regimes, are described in this section. Gaps in the numbering of the regimes is a vestige of previous modeling efforts completed for P- and R-reactors.[1]

4.2.1 K-reactor Flux Profiles and Fluence

The irradiation history of K-reactor was the most complicated of all of the SRS reactors. Ten generic core configurations were devised to characterize the primary operational regimes of the K-reactor operations. Summary descriptions of these ten regimes are given below.

Regime 1. Plutonium production operation in a (nearly) uniform core of natural or slightly enriched uranium metal assemblies. Charges in this regime were "unblanketed" – the outermost ring of lattice positions was filled with standard fuel assemblies. The leakage spectra for this regime was previously calculated for the P-reactor and R-reactor study.[1] It was referred to as "Regime 1" in that study and is used here for operational periods that had this type of charge.

Regime 3. Operation of Enriched-Depleted (E-D) charges of highly enriched "driver" fuel and depleted uranium target assemblies in charges blanketed with lithium-aluminum target assemblies. This is the same as "Regime 3" of the P-reactor and R-reactor study, and those region spectra are used here for all operational periods having this type of charge.

Regime 4. This is a uniform lattice of HEU tritium-producing assemblies of the Mark VI-J-type, with an outer blanket of the NU/SEU Pu-Producing assemblies.

Regime 7. Charges in this regime comprise a lattice of HEU tritium-producing assemblies of the Mark 22-type with 60 thorium target assemblies (1 per cluster in Clusters 2 through 61) surrounded by a blanket of annular lithium-aluminum target assemblies.

Regime 8. This is the standard Mark 22 charge of 432 assemblies inside of a vacant ring of assembly positions, all inside of a blanket of annular lithium-aluminum targets.

Regime 9. Charges in this regime have a blanket of annular lithium-aluminum target assemblies instead of the NU-SEU assemblies, but are otherwise identical to Regime 4.

Regime 10. This regime comprises Mark VI-C drivers with 170 Mark-V-TO ThO_2 targets in the Control and Buckled zones, with a blanket of annular lithium-aluminum targets.

Regime 11. This consisted of HEU Mark 12A drivers in an E-D charge of ThO_2 (or ThO_2 and Np) targets, with DU (0.14%) Mark V-F blanket assemblies.

Californium-I. The high-flux K-reactor californium campaign was a small core (roughly the inner 19 clusters) of short (6-ft.) Mark 18 assemblies.

Curium-II. The Cm-II campaign was a small core (roughly the inner 37 clusters) of 10-ft. long Mark XII and (1-per-cluster) Mark VI-PS assemblies. The inner radial positions of clusters 38 through 61 were vacant; the blanket consisted of the outer positions of those clusters. The blanket was made up of short (roughly 5-ft.) bismuth target assemblies and approximately 20 Mark VI-N (NpO_2) target assemblies.

K-reactor operations have been characterized on a monthly basis as belonging to one of these ten regimes, as shown in Table 15. Months having no at-power operations are shown as "Down" in the table.

For each operational regime, a normalized 3-group neutron flux is calculated for the various regions of interest. These include:

1. The septifoil housings and spiders. These semi-permanent components had an in-reactor lifetime that was typically less than 5-years. Activation of these components is assumed to be limited to the last five years of operations,

2. The 432 semi-permanent Universal Sleeve Housing (USH) tubes assumed present, with activation limited to the last five years of operation.

3. The reactor tank – assumed to consist of top and bottom 1″ plates and a ½″ sidewall.

4. Fourteen external regions consisting of homogenized contents representative of the thermal and biological shield materials surrounding the reactor tank.

5. A 0.002-inch thick crud layer assumed to be present on the tank inner surfaces and on the aluminum components assumed present in the reactor (USH tubes, control housings and spiders).

The normalized flux spectrum for the different regions is converted to an absolute neutron flux using the exposure and irradiation history appropriate for each individual region.

4.2.2 L-reactor Flux Profiles and Fluence

Six generic core configurations were used to characterize the key regimes of the L-reactor operations. Five of these six regimes were common to K-reactor - Regimes 1, 3, 4, 7, and 9. Regime 6 is seen only in L-reactor. It is described below.

Regime 6. The core consisted of a lattice of HEU tritium-producing assemblies of the Mark 22-type with 60 thorium target assemblies (1 per cluster in Clusters 2 through 61) surrounded by a blanket of thorium Mark VII-T assemblies. Regime 6 differs from Regime 7 by having a thorium blanket instead of the lithium target blanket.

L-reactor operations have been characterized on a monthly basis as belonging to one of these six regimes, as shown in Table 16. Months having no at-power operations are shown as “Down” in the table.

For each operational regime, a normalized 3-group neutron flux is calculated for the various regions of interest. These include:

1. The septifoil housing and spider. These semi-permanent components would have been present in the reactor for less than three years (October 31, 1985 to June 23, 1988), the reactor having been mothballed for years prior to this.

2. The 516 semi-permanent Universal Sleeve Housing (USH) tubes associated with the enriched driver elements and depleted target elements irradiated over the reactor’s last 32 operational months.

3. The reactor tank – assumed to consist of top and bottom 1″ plates and a ½″ sidewall.

4. Fourteen external regions consisting of homogenized contents representative of the thermal and biological shield materials surrounding the reactor tank.

5. A 0.002-inch thick crud layer assumed to be present on the tank inner surfaces and on the aluminum components assumed present in the reactor.

The normalized flux spectrum for the different regions is converted to an absolute neutron flux using the exposure and irradiation history appropriate for each individual region.

4.2.3 C-reactor Flux Profiles and Fluence

Seven generic core configurations were used to characterize the key regimes of the C-reactor operations. These seven regimes are unique to C-reactor because of differences between it and the other four reactors. The major difference is C-reactor's 1-foot thick radial reflector and the different surrounding structures. C-reactor also had two deflector (or "poison") plates above the core instead of just one, and inside the vessel there were 4 annular support rings, or "chimes" below the lower deflector plate.

The larger reactor vessel impacted core operations. C-reactor had 73 control positions instead of 61. The number of safety rod positions were also different – 79 in C, versus 66. Because of the 1-foot thick radial D_2O reflector, neutron fluence on the tank wall was reduced, so with the exception of the Mark 22 charges of the 1980's, all C-reactor charges were unblanketed. The seven regimes specific to C-reactor are briefly described below.

Regime 1C. This is a plutonium-producing charge made up of an unblanketed, uniform lattice of NU or SEU assemblies.

Regime 2C. This is a tritium-producing charge of unblanketed HEU Mark VI-J assemblies.

Regime 3C. Similar to Regime 2C but made up of Mark 22-type assemblies, this was another unblanketed, HEU, tritium-producing charge.

Regime 4C. This was an E-D, co-producing (i.e. tritium and plutonium) charge of unblanketed Mark 16-31 assemblies.

Regime 5C. This is essentially the standard tritium-producing Mark 22 charge transplanted to C-reactor. Because of the additional 12 control positions, the charge consisted of 420 assemblies instead of 432. In all other respects, the lattice structure is identical to that of Regime 8. (The leakage spectra are different though because of the 1-foot reflector.)

Regime 6C. This is another Mark 22 charge. The vacant ring of 84 positions surrounding the core but inside of the lithium blanket assemblies has been filled with Mark 22 fuel assemblies; otherwise it is the same as Regime 5C.

Regime 7C. This is the C-reactor High Flux charge of February 1965 – February 1966.[7] This was a short (6-foot), small-core (Clusters 1-19 only) of HEU Mark VI-F fuel assemblies.

C-reactor operations have been characterized on a monthly basis as belonging to one of these seven regimes, as shown in Table 17. Months having no at-power operations are shown as "Down" in the table.

For each operational regime, a normalized 3-group neutron flux is calculated for the various regions of interest. These include:

1. The septifoil housing and spider. The semi-permanent components for the 73 control positions are assumed to be present and to have been in the reactor over its last five years of operation.

2. The 500 semi-permanent Universal Sleeve Housing (USH) tubes associated with the last Mark 22 charge (C-5) are assumed to be present in the vessel. These tubes have different assumed irradiation times though. After the end of the C-1.6 E-D cycle, some (or all) of the USHs would have been removed since the C-2 Mark 22 charge comprised only 420 assemblies. For the C-5 Mark 22 charge, 80 of the 84 positions in the vacant ring were utilized as fuel positions. (Four stuck plenum plugs prevented use of four positions.) It is conservatively assumed that the inner 420 USHs were present for five full years of operations; the 80 USHs inserted for the C-5 charge, are assumed only for that charge (Oct 1984 – Jun 1985).

3. The reactor tank – assumed to consist of two top plates and one bottom plate, all 1″ thick, the four annular chimes, and a ½″ sidewall.

4. Fourteen external regions consisting of homogenized contents representative of the thermal and biological shield materials surrounding the reactor tank.

5. A 0.002-inch thick crud layer assumed to be present on the tank inner surfaces, including both sides of the two upper deflector plates, and on the aluminum components assumed present in the reactor.

The normalized flux spectrum for the different regions is converted to an absolute neutron flux using the exposure and irradiation history appropriate for each individual region.

4.3 Flux Spectra on Reactor Tanks

The computed flux spectra on the reactor tank steel structures for each operating regime are shown in Figures 7 - 9. Regime spectra are compared for each individual reactor. As previously mentioned, for K-reactor and L-reactor, identical regime numbers have identical flux spectra. Fluxes have been normalized to a per MW basis. For example, if a reactor's average operating power over a 30-day period was 2000 MW, the appropriate flux would be multiplied by 2000 to obtain the average flux over this period; multiplying again by 30 would give the fluence over the 30-day period.

The effect of C-reactor's reflector can be seen by noting that the reactor cores of Regimes 1 and 1C are nearly identical, the reactor cores of Regimes 8 and 5C are nearly identical, and the K-reactor Californium charge and the C-reactor High Flux charge (Regime 7C) are similar. (The C-reactor cores have 12 fewer fuel assemblies and 12 more control positions.) The effect is dramatic for unblanketed charges, Regime 1 vs. Regime 1C; and is noticeable but not as pronounced for the lithium-blanketed charges, Regime 8 vs. Regime 5C. The epithermal and fast fluxes are typically significantly lower at the tank walls, which results in lower thermal fluxes(and fewer activation products) in the surrounding structural materials.

4.4 Determination of the Activation Products

The flux and fluence characteristics with time and position are determined as described previously with MCNP5. ORIGEN-S of the SCALE6 collection of computer codes is used to simulate the activation of the materials within the reactor system due to the presence of the

neutron flux calculated by MCNP5. ORIGEN-S uses a three-group neutron flux to generate flux weighted cross-sections for the isotopes contained in the exposed material in order to predict the number and type of nuclear transmutations that occur within the material due to the neutron flux. The operational history of the reactor provides a means by which the estimated neutron flux and fluence determined by MCNP5 can be distributed to the reactor system over the life of the reactor operation. This allows for credit to be taken for the decay of activation product radioisotopes over time within the system.

For each material region of interest for which flux profiles and fluence is estimated by MCNP5 simulations, a series of ORIGEN-S decay and depletion simulation cycles are performed. Although there were many on/off cycles of the reactor in a given month, a division into one cycle at power and one cycle off for simulations provide a reasonable simplifying approximation for the actual complicated reactor operating history. Tables 18 - 20 provide a summary of the simulation cycles used for each of the material regions of interest for K-reactor, L-reactor, and C-reactor, respectively. For each month of operation, the number of days at power is determined from the power and energy production data recorded in the reactor operation log books by dividing the average power into the total energy production as provided in Tables 4 - 6, respectively for K-reactor, L-reactor, and C-reactor. The exposure cycle for a given month is conservatively assumed to occur in the end of a given month with the remaining days in the month ascribed to a decay cycle preceding. Therefore, in the simulation of material activation, the material of interest in each month is first decayed from the contents determined in the previous month's exposure until the onset of the current month's exposure cycle. This methodology allows for credit to be taken for decay while maintaining conservatism in the calculations due to the application of exposure time at the end of each month.

The sixth column of Tables 18 - 20 provides information on that fraction of the total fluence experienced by a material region over the entire reactor operating lifetime which is to be applied in the ascribed calendar year. This fraction is based upon the reactor operating history provided in Tables 4 - 6 and is calculated as the ratio of the monthly reactor energy production to the sum total reactor energy production.

5.0 RESULTS

5.1 Flux Profile Development

The reactor flux profile and fluence determination are subject to the statistical uncertainties associated with the Monte Carlo methodologies utilized in the MCNP5 code package. The statistical uncertainties associated with the flux and fluence calculations tend to be very small in the regions with the higher neutron populations. That is, the simulated regions in and immediately surrounding the reactor tank had calculated uncertainties of less than 0.6% as calculated by MCNP5. The majority of the activity in the reactor system, ~99.9% of the total activity, is expected in these regions. The low uncertainty in these regions will result in little variation in these regions. The regions outside the thermal shields tend to have notable higher statistical uncertainty as determined by the MCNP5 code. However, the miniscule contributions of these regions to the total system activity make the statistical uncertainty relatively insignificant.

5.1.1 K-Reactor Fluence

The results for the primary operating regimes for K-reactor are reported in Tables 21 - 30. The reported results include a three group flux modified by the reactor energy production and time at

power to give neutron fluence in neutrons/cm^2. These data are used as input to the activation analysis of the respective structures and components.

The contents and location of the various homogenized regions in Tables 21 - 30 were given in Tables 8 - 11.

5.1.2 L-Reactor Fluence

The results for the primary operating regimes for L-reactor are reported in Tables 31 - 36. The reported results include a three group flux modified by the reactor energy production and time at power to give neutron fluence in neutrons/cm^2. These data are used as input to the activation analysis of the respective structures and components.

The contents and location of the various homogenized regions in Tables 31 - 36 were given in Tables 8 - 11.

5.1.3 C-Reactor Fluence

The results for the primary operating regimes for C-reactor are reported in Tables 37 - 43. The reported results include a three group flux modified by the reactor energy production and time at power to give neutron fluence in neutrons/cm^2. These data are used as input to the activation analysis of the respective structures and components.

The contents and location of the various homogenized regions in Tables 37 - 43 were given in Tables 8 , 12 - 14.

5.2 Materials Activation Analysis

All contents presented in the activation analysis have been decayed to December 31, 2009. An arbitrary cutoff of 1×10^{-5} curies is used throughout Tables 44 - 55.

5.2.1 K-Reactor

Results of the activation analysis calculations for K-reactor are provided in Tables 44 - 47. These tables contain the total curie content by radioisotope for each of the material regions specified in the reactor model. Table 44 contains the total curie content within the reactor tank and in the internal aluminum components. This table also contains curie content contained within the surface deposit layer on the internal tank surfaces and the total content summed over the entire system.

Tables 44 - 47 indicate that the majority of the activity within the K-reactor system is generated primarily from just a few isotopes. The isotopes ^{60}Co and ^{63}Ni comprise about 95.3% of the total activity in the system. The addition of ^{59}Ni, ^{14}C, and ^{55}Fe accounts for 99.95% of the total system activity. Furthermore, the activity in the reactor tank wall accounts for about 75.2% of the total system activity with another 24.5% of the total in the three regions directly surrounding the reactor tank as illustrated in Figure 14.

5.2.2 L-Reactor

Results of the activation analysis calculations for L-reactor are provided in Tables 48 - 51. These tables contain the total curie content by radioisotope for each of the material regions specified in the reactor model. Table 48 contains the total curie content within the reactor tank and in the internal aluminum components. This table also contains curie content contained within the

surface deposit layer on the internal tank surfaces and the total content summed over the entire system.

Tables 48 - 51 indicate that the majority of the activity within the L-reactor system is generated primarily from just a few isotopes. The isotopes ^{60}Co and ^{63}Ni comprise nearly 96.7% of the total activity in the system. The addition of ^{59}Ni, ^{14}C, and ^{55}Fe accounts for 99.85% of the total system activity. Furthermore, the activity in the reactor tank wall accounts for nearly 75.6% of the total system activity with another 24.0% of the total in the three regions directly surrounding the reactor tank as illustrated in Figure 15.

5.2.3 C-Reactor

Results of the activation analysis calculations for R-reactor are provided in Tables 52 - 55. These tables contain the total curie content by radioisotope for each of the material regions specified in the reactor model. Table 52 contains the total curie content within the reactor tank and in the internal aluminum components. This table also contains curie content contained within the surface deposit layer on the internal tank surfaces and the total content summed over the entire system.

Tables 52 - 55 indicate that the majority of the activity within the R-reactor system is generated primarily from just a few isotopes. The isotopes ^{60}Co and ^{63}Ni comprise about 97.7% of the total activity in the system. The addition of ^{59}Ni, ^{14}C, and ^{55}Fe accounts for 99.97% of the total system activity. Furthermore, the activity in the reactor tank wall accounts for nearly 74% of the total system activity with another 26.1% of the total in the three regions directly surrounding the reactor tank as illustrated in Figure 16.

5.3 Model Validation Results

Recent modeling efforts for analyses of the activation product generation in P-reactor and R-reactor[1] included the evaluation of the model and methodology developed for that effort and employed in the current analysis against analytical assays of several physical samples from the R-reactor vessel. The data from the validation analytical and laboratory analyses indicate that the models and methodology developed in the previous P- and R- reactor analysis work scope and employed in the current work scope to simulate the neutron activation processes within the reactor system were able to provide accurate estimations for radioisotope inventory. The close agreement between the measured and previously calculated activation product inventory provides validation of the methodology and models used in the current analysis to predict the activation product generation and depletion within the reactor systems.

5.4 Model Uncertainty

The model and methodology described herein provides a best estimate of the time dependent radioisotopic inventory of nuclear systems. As mentioned previously, there is only a slight degree of statistical uncertainty associated with the determination of the flux profiles within the reactor systems. These uncertainties tend to be less than a percent of the total predicted flux. The uncertainty within the activation calculations are related to uncertainty in neutron cross-sections. The uncertainty in the neutron cross-sections are expected to tend towards insignificance.

There is some degree of uncertainty in the assumed initial compositions used in the current methodology. These uncertainties were minimized by using archival records, where available. In addition, there is uncertainty introduced through the simplification of the reactor operating history including the control rod positions, material specification and geometric representations, and operating power with time. These uncertainties are not directly quantifiable, however,

simplifying assumptions that were necessarily made where selected to minimize the uncertainty while maintaining conservatism. That is, non-conservative assumptions were specifically avoided. Based upon these premises, the models and methodology used in the current work provide a best estimate of the current inventory of the K-, L-, and C-reactor systems.

Consideration of the validation efforts for the models and methodology completed in the previous analysis of P-and R- reactors, it is determined that a factor of 50% uncertainty would provide reasonable assurance of bounding the actual reactor system inventory with the predicted values. This 50% is derived from the calculations and measurements of radioactive nickel within the steel tank. The calculated values were approximately 50% lower than the measured values.[1] This uncertainty is qualitatively attributed to three sources: 1) the uncertainty in the initial stainless steel composition; 2) the uncertainty associated with actual operating conditions directly adjacent the port location; and 3) the uncertainty in the laboratory measurements. It is expected that the uncertainty in the radioisotopic contents over the entire reactor system is bounded by 50% uncertainty.

5.5 Trace Uranium in Stainless Steel

Uranium is found in nature in more than 200 different minerals. On average, uranium occurs in the earths crust at a concentration of around 3ppm. Because of the ubiquitous nature of uranium, it is often found in rock including granite and sandstone and in lignite and monazite sands. It also finds its way into many of the materials of construction used in the civil engineering field including concrete, asphalt, bricks, and steel. Results of the laboratory analysis of the disk samples in the P- and R-reactor analyses indicate that the concentration of uranium in the stainless steel used in the construction of R-reactor range from a low of about 0.5-ppm to about 2.5-ppm. In order to account for the variability and uncertainty in the sampling methods and the reactor fabrication process, a conservative value 5-ppm of trace uranium impurities, in the form of natural uranium, in the stainless steel is assumed in the current work.

6.0 CONCLUSIONS

An analytic model and calculational methodology has been established previously[1] and is employed in the current work to quantify the radiosotopes present in K-reactor, L-reactor, and C-reactor tanks at the SRS and the surrounding structural materials as a result of neutron activation of the materials during reactor operation. The results indicate that as of December 31, 2009, the majority of the total radioactivity within each reactor system due to the activation of the metal within the system is contained in the reactor tanks themselves. The second highest contributor to the total activity is in the region of the thermal shield directly outside the active fuel region. This region of the thermal shield showed nearly an order of magnitude decrease in total activity due to activation product formation than that of the reactor tank itself.

7.0 REFERENCES

1 WSRC-TR-2008-00049, “Evaluation of Activation Products in Remaining R- and P-Reactor Structures,” D. W. Vinson and R. L. Webb (April 2008).

2 Q-TTR-P-00001, “SRNL to Provide Estimate of the Inventory of Neutron Activated Metals in Reactor Vessel Materials,” (October 18, 2007).

3 SRS 1Q, “Quality Assurance Manual”, Procedure 20-1, Rev. 9, “Software Quality Assurance” (November 1, 2007).

4 LA-UR-03-1987, **MCNP – A General Monte Carlo N-Particle Transport Code, Version 5**, X-5 Monte Carlo Team, April 24, 2003 (Revised 10/03/05).

[5] I.C. Gauld, O.W. Hermann, and R.M. Westfall, **ORIGENS-S: SCALE System Module to Calculate Fuel Depletion, Actinide Transmutation, Fission Product Buildup and Decay, and Associated Radiation Source Terms,** ORNL/TM-2005/39, Volume II, Book 1, Section F7 (November 2006).

[6] G. R. Rose, "SDD Engineering Input for SRNL's 105-P Reactor Core Model,' SDD-2007-00281, Rev 0 (November 12, 2007).

[7] DP-999TL, DP-999, The Savannah River High Flux Demonstration, August 10, 1965.

8.0 FIGURES

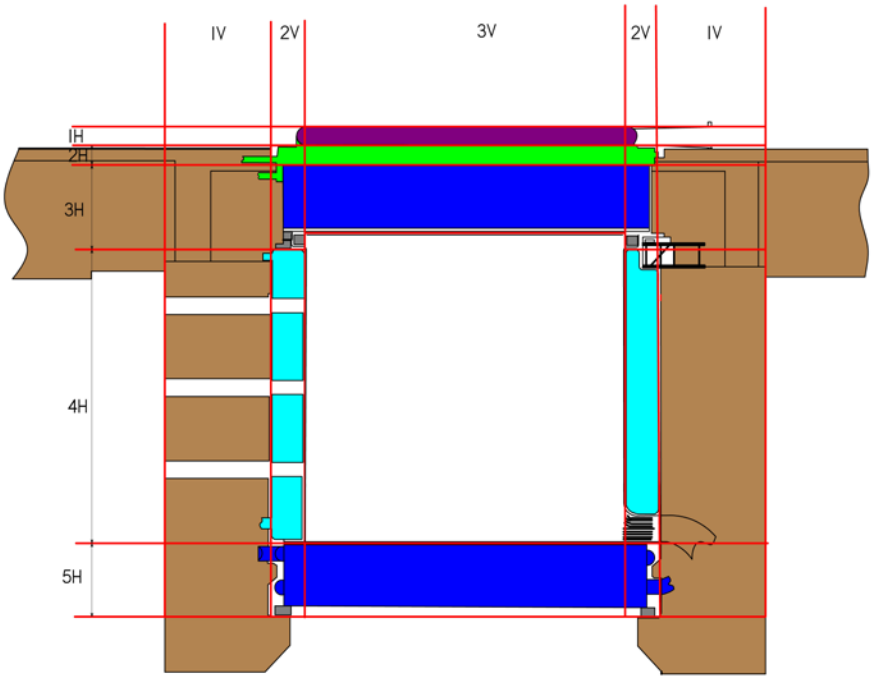

Figure 1 Schematic of P/K/L/R-Reactor Vessel.

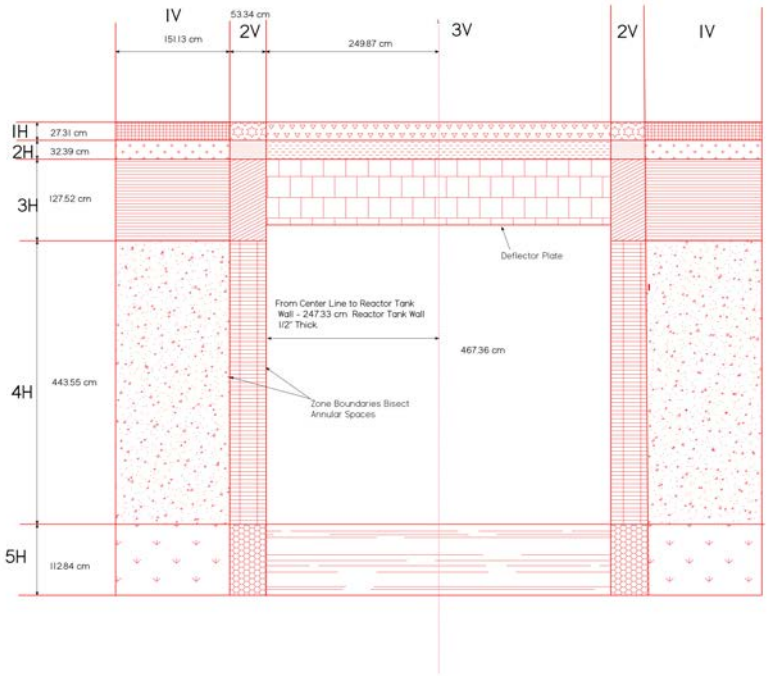

Figure 2 P/K/L/R- Reactor Zones and Layers, Elevation View.[6]

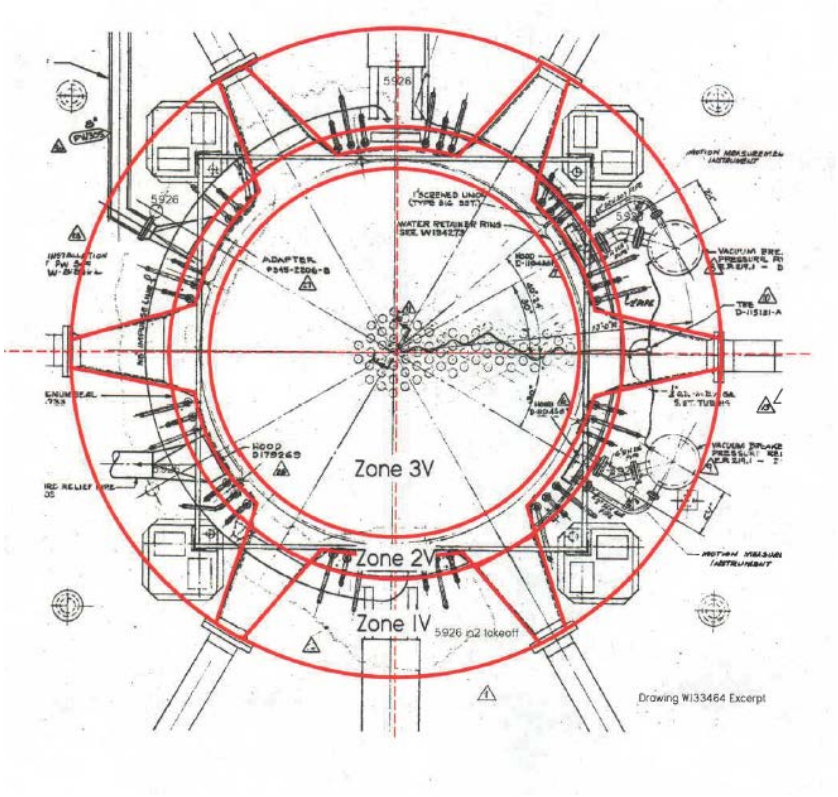

Figure 3 P/K/L/R-Reactor Zones 1V Through 3V – Plan View.[6]

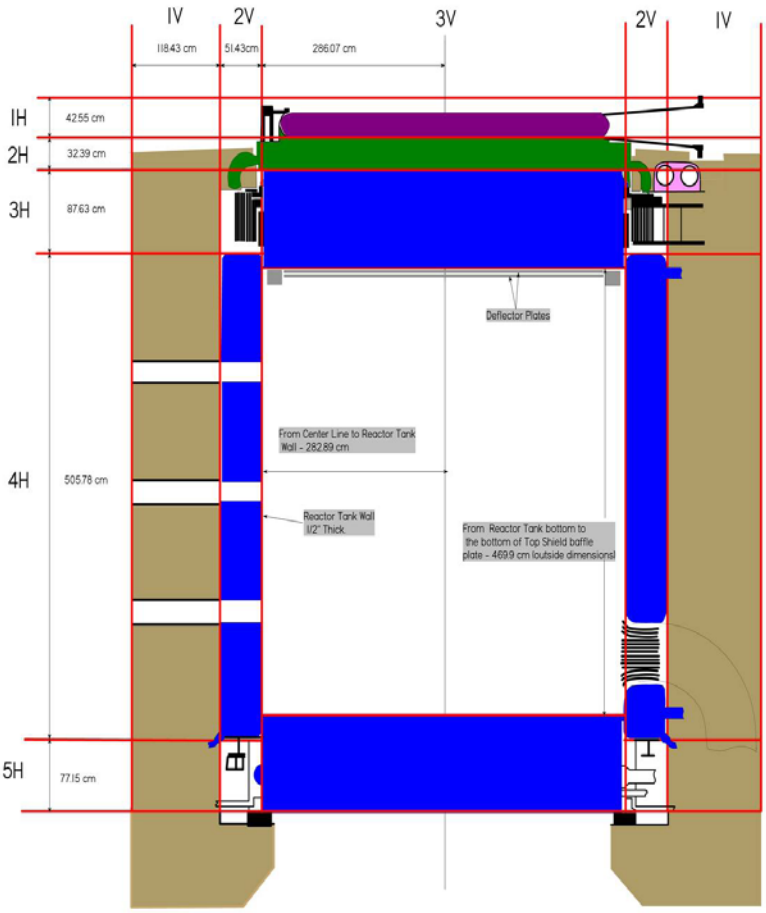

Figure 4 Schematic of C-Reactor Vessel.

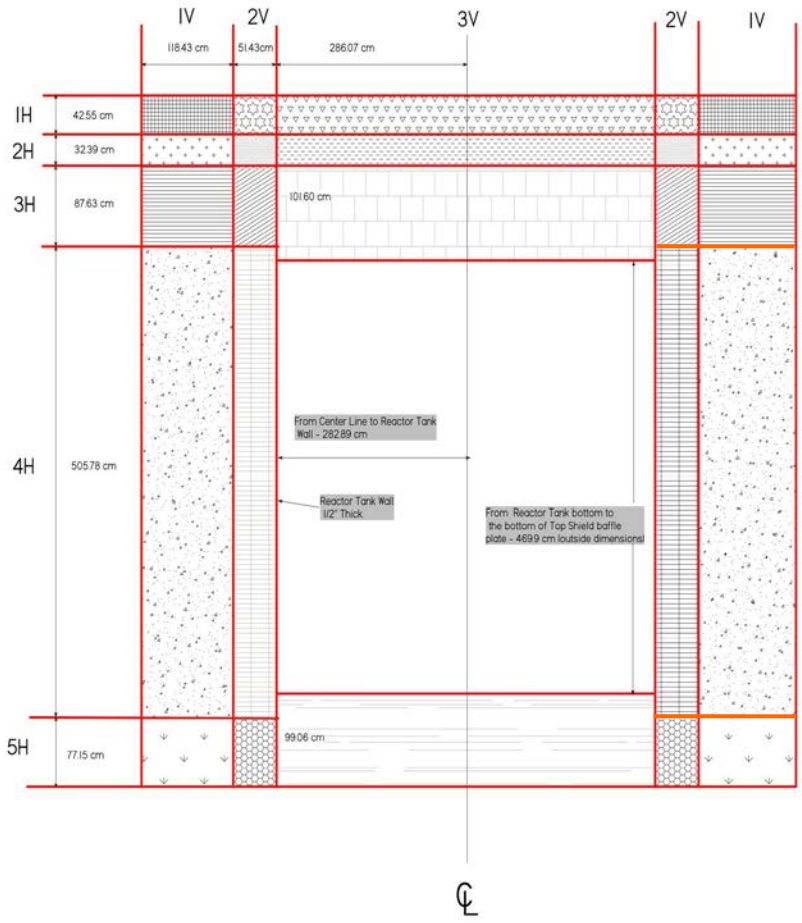

Figure 5 C - Reactor Zones and Layers, Elevation View

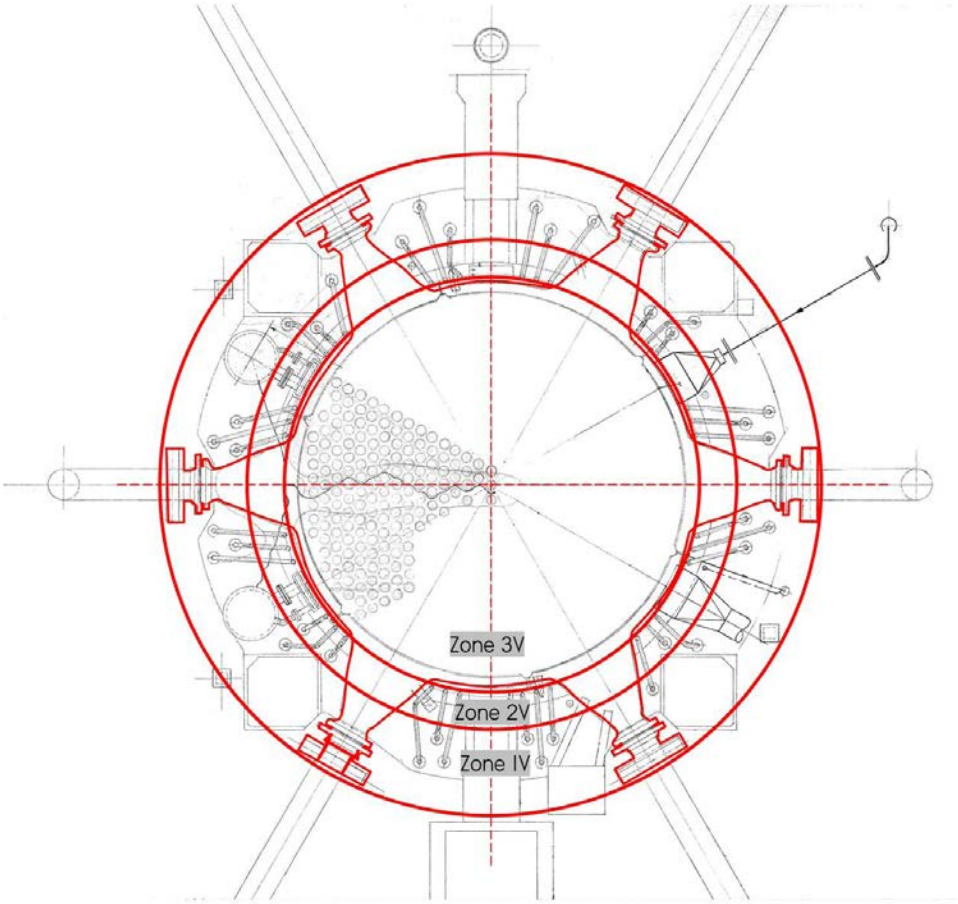

Figure 6 C - Reactor Zones 1V Through 3B -- Plan View

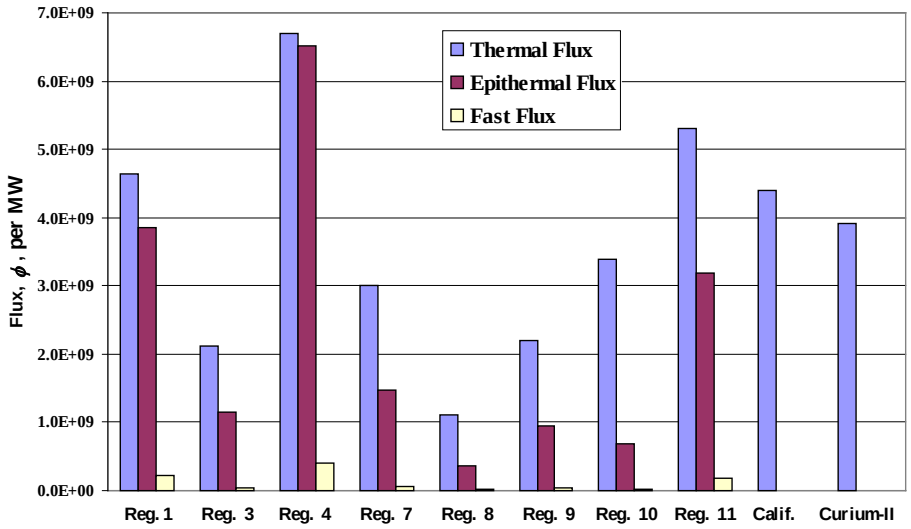

Figure 7 Flux spectra on K-reactor tank walls by operational regime.

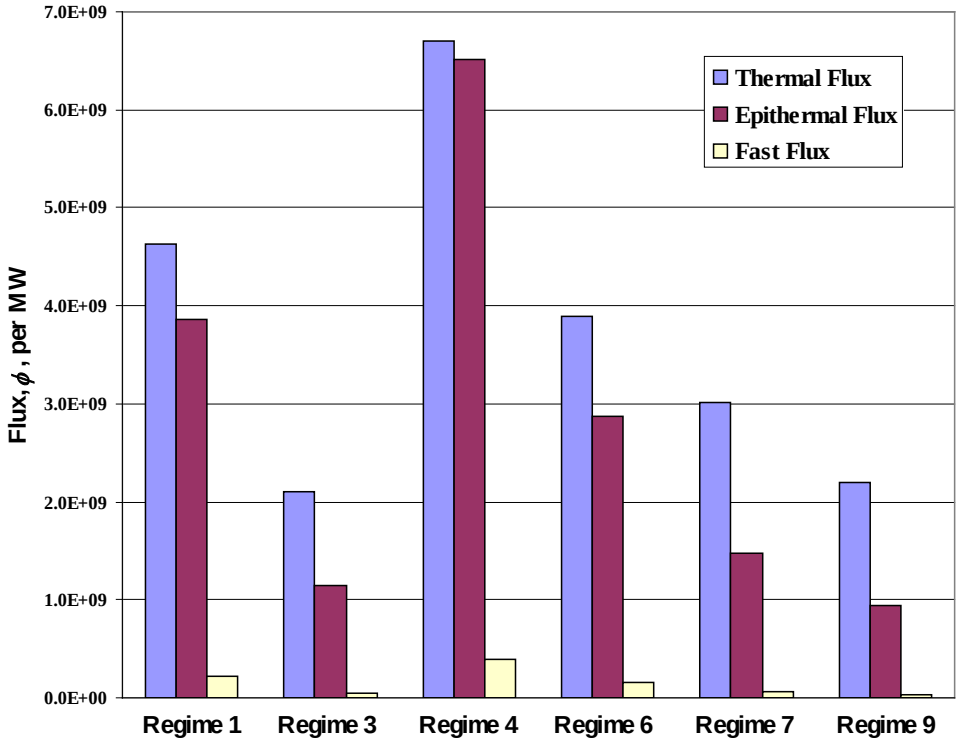

Figure 8 Flux spectra on L-reactor tank walls by operational regime.

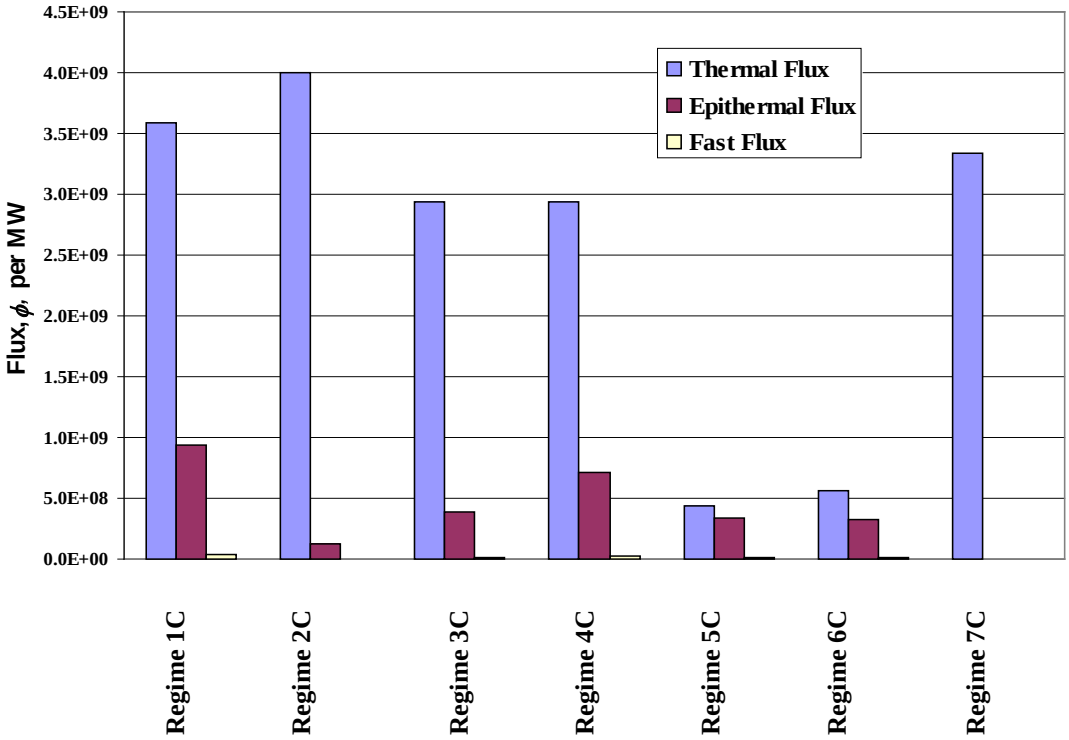

Figure 9 Flux spectra on C-reactor tank walls by operational regime.

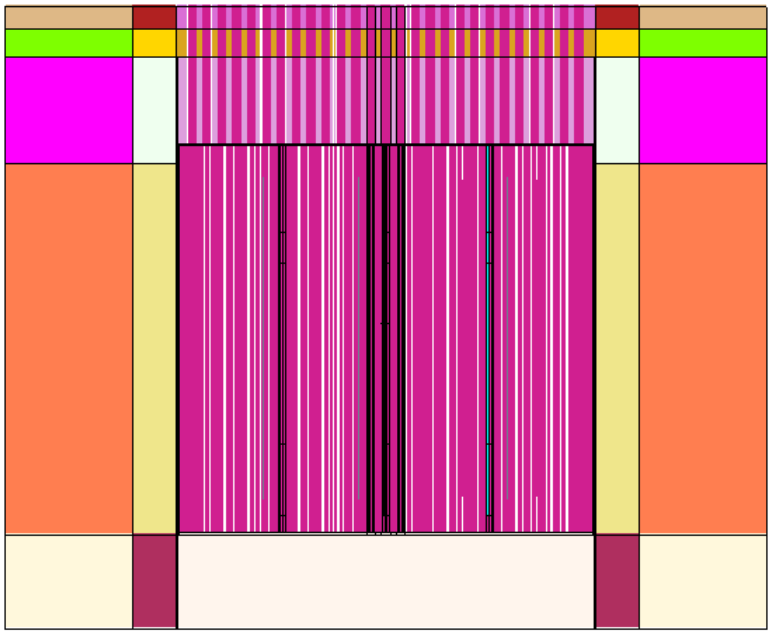

Figure 10 **XZ Cross-section of neutronics model showing different regions outside of the K/L-reactor core.**

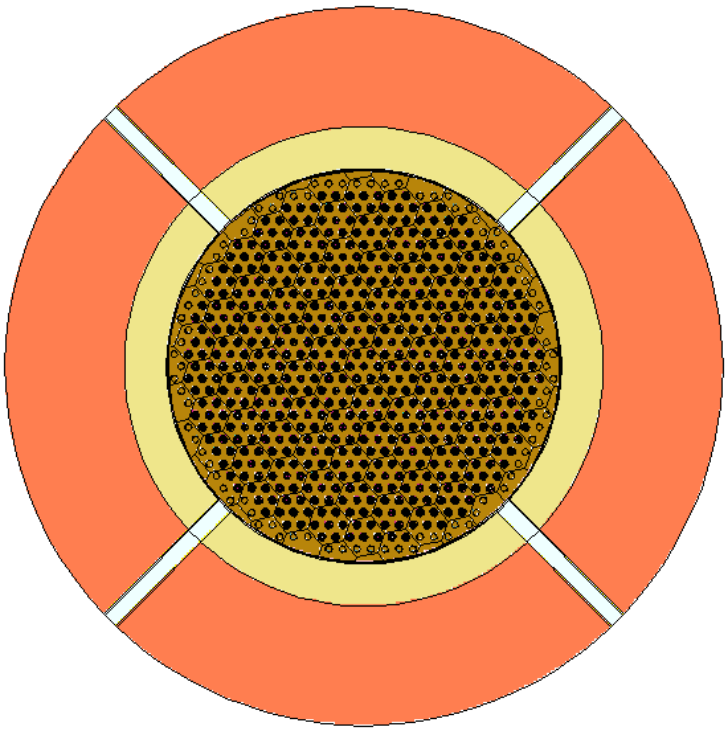

Figure 11 **XY Cross-section of K/L-reactor neutronics model at elevation of lower instrument ports.**

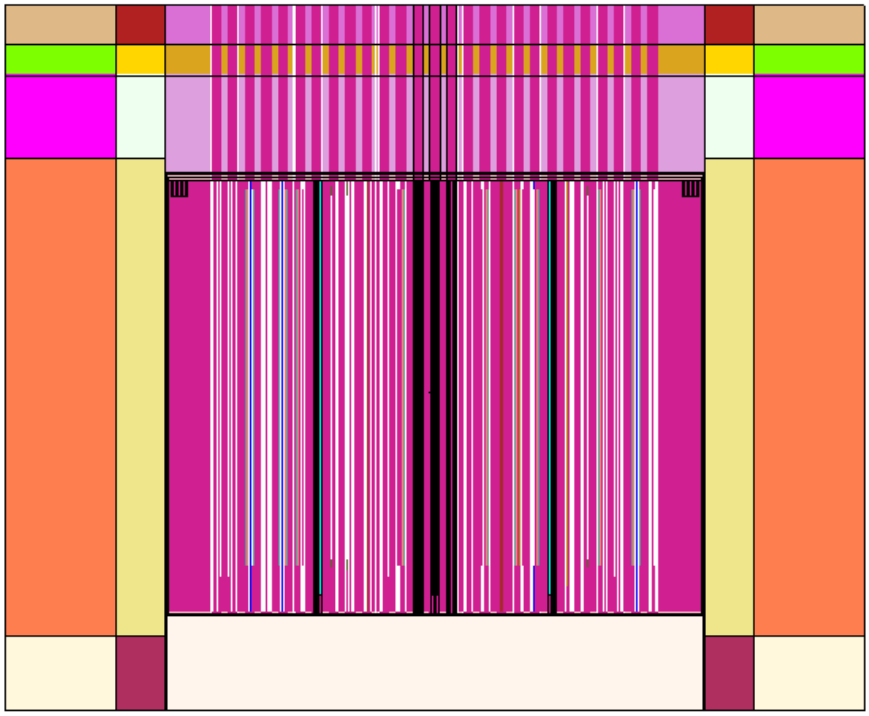

Figure 12 XZ Cross-section of neutronics model showing different regions outside of the C-reactor core.

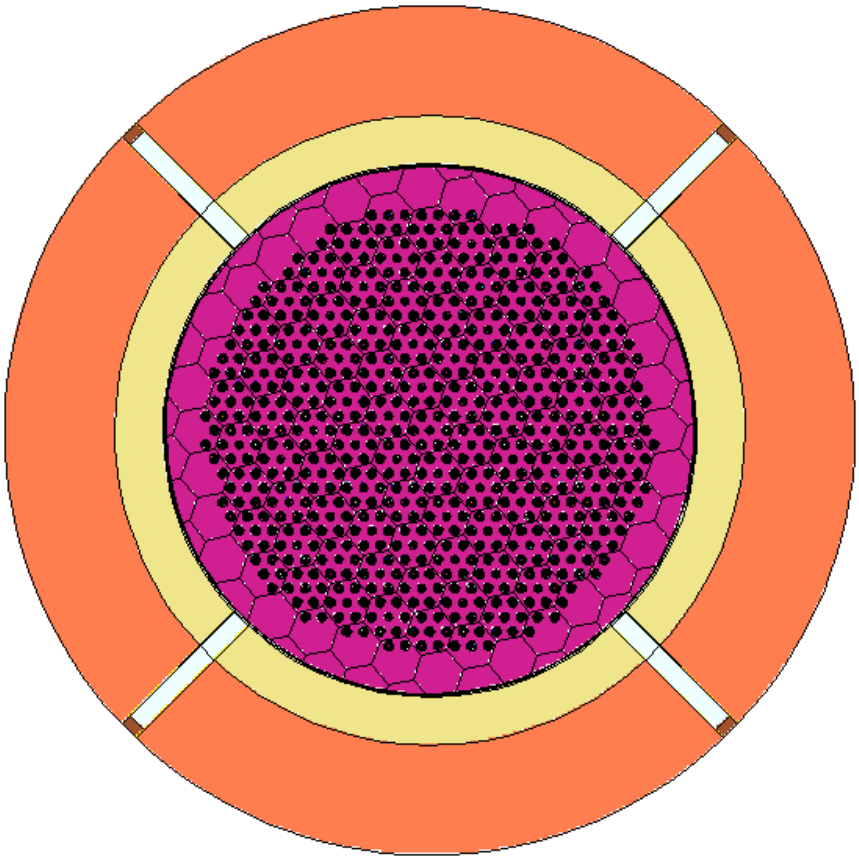

Figure 13 XY Cross-section of C-reactor neutronics model at elevation of lower instrument ports.

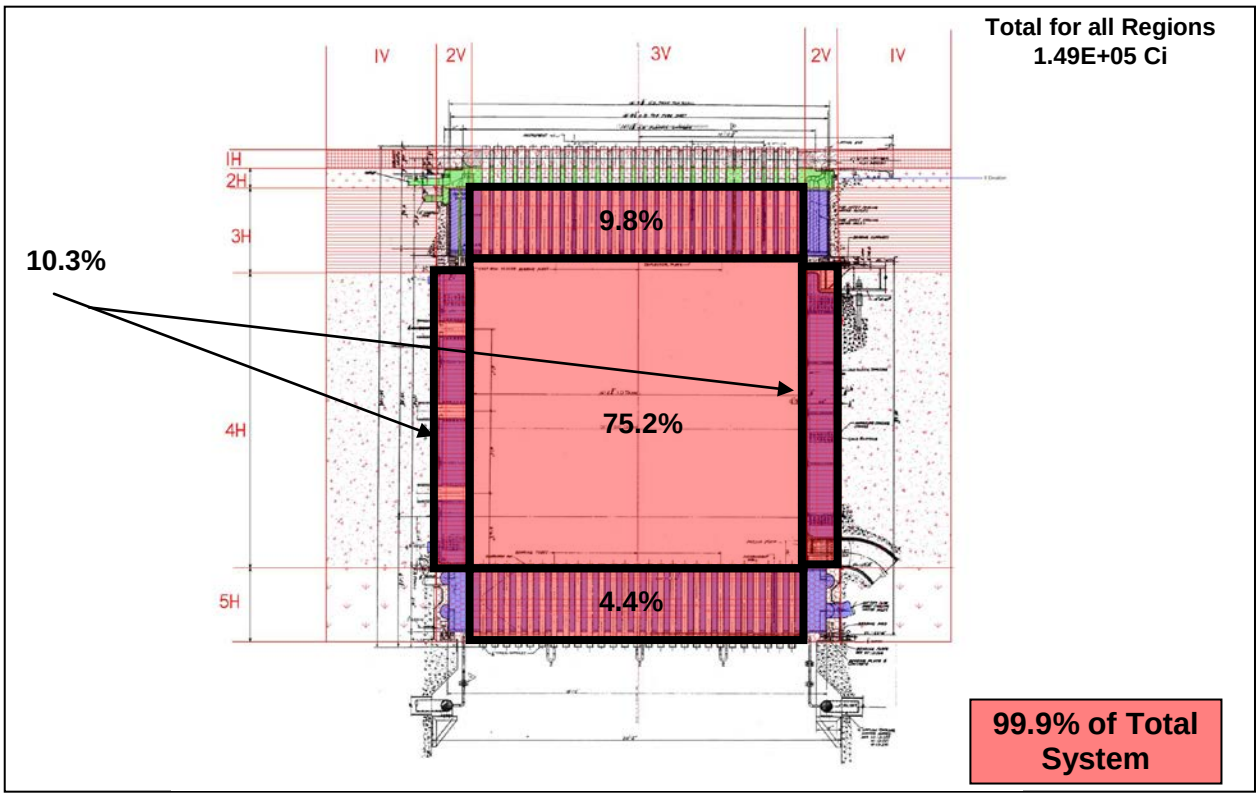

Figure 14 Summary schematic showing distribution of majority of activity remaining in K-reactor.

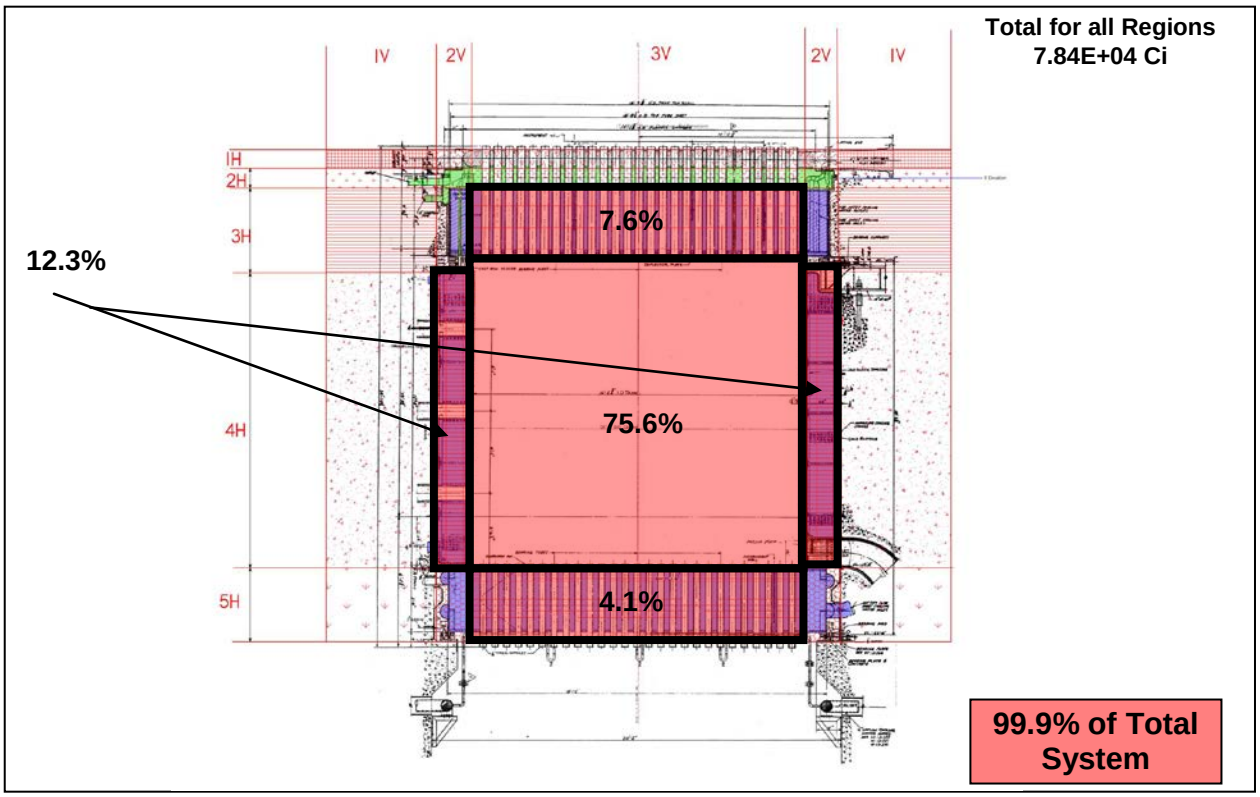

Figure 15 Summary schematic showing distribution of majority of activity remaining in L-reactor.

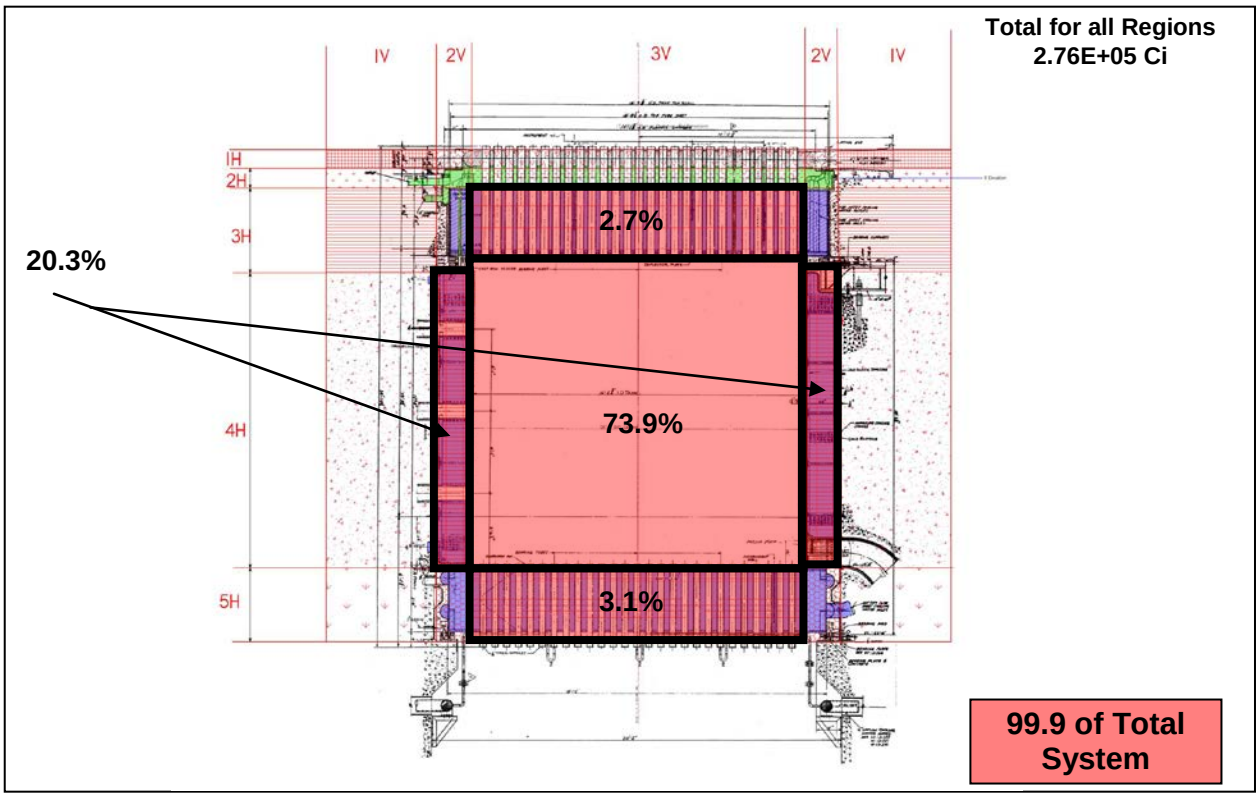

Figure 16 Summary schematic showing distribution of majority of activity remaining in C-reactor.

9.0 TABLES*

Table 1 Power History of K-Reactor by Year

Year	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)	Percent of Total Fluence	Cumulative Fluence
1954	1.953E+04	3.300E+02	2.364E+02	0.0	0.12%	0.12%
1955	1.655E+05	5.354E+02	3.092E+02	56.1	0.99%	1.11%
1956	3.033E+05	1.023E+03	2.966E+02	68.7	1.82%	2.93%
1957	3.297E+05	1.131E+03	2.914E+02	73.8	1.98%	4.91%
1958	5.889E+05	1.773E+03	3.322E+02	33.0	3.53%	8.44%
1959	5.945E+05	1.904E+03	3.122E+02	53.0	3.57%	12.01%
1960	6.414E+05	1.878E+03	3.415E+02	23.7	3.85%	15.86%
1961	6.940E+05	2.056E+03	3.376E+02	27.7	4.16%	20.02%
1962	6.869E+05	2.079E+03	3.304E+02	34.8	4.12%	24.14%
1963	5.710E+05	2.169E+03	2.632E+02	102.1	3.43%	27.57%
1964	6.544E+05	2.173E+03	3.012E+02	64.1	3.93%	31.49%
1965	5.543E+05	1.903E+03	2.913E+02	74.0	3.33%	34.82%
1966	3.999E+05	1.527E+03	2.618E+02	103.4	2.40%	37.22%
1967	4.363E+05	1.723E+03	2.533E+02	112.0	2.62%	39.83%
1968	6.174E+05	2.035E+03	3.034E+02	61.8	3.70%	43.54%
1969	4.783E+05	1.672E+03	2.861E+02	79.1	2.87%	46.41%
1970	3.079E+05	1.115E+03	2.762E+02	89.1	1.85%	48.26%
1971	4.106E+05	1.447E+03	2.837E+02	81.5	2.46%	50.72%
1972	5.477E+05	1.840E+03	2.976E+02	67.7	3.29%	54.00%
1973	5.797E+05	1.833E+03	3.162E+02	49.0	3.48%	57.48%
1974	5.868E+05	1.886E+03	3.111E+02	54.1	3.52%	61.00%
1975	4.192E+05	1.542E+03	2.719E+02	93.4	2.52%	63.52%
1976	4.453E+05	1.556E+03	2.863E+02	79.0	2.67%	66.19%
1977	4.106E+05	1.483E+03	2.768E+02	88.4	2.46%	68.65%
1978	4.452E+05	1.667E+03	2.671E+02	98.1	2.67%	71.32%
1979	4.250E+05	1.612E+03	2.636E+02	101.6	2.55%	73.87%
1980	5.644E+05	1.948E+03	2.897E+02	75.6	3.39%	77.26%
1981	5.483E+05	1.829E+03	2.997E+02	65.5	3.29%	80.55%
1982	6.248E+05	2.038E+03	3.066E+02	58.6	3.75%	84.30%
1983	6.103E+05	2.138E+03	2.854E+02	79.9	3.66%	87.96%
1984	5.481E+05	2.262E+03	2.424E+02	122.9	3.29%	91.25%
1985	6.097E+05	2.242E+03	2.720E+02	93.3	3.66%	94.91%
1986	4.041E+05	1.781E+03	2.269E+02	138.4	2.42%	97.33%
1987	3.100E+05	1.010E+03	3.069E+02	58.4	1.86%	99.19%
1988	1.283E+05	6.080E+02	2.111E+02	154.1	0.77%	99.96%
1992	6.728E+03	2.058E+02	3.269E+01	332.6	0.04%	100.00%
Post-Shutdown				6417.0		
Totals	**1.667E+07**		**1.007E+04**	**2948.5**	**100.00%**	

* **NOTE "—" is entered for Zero values throughout this section.**

Table 2 Power History of L-Reactor by Year

Year	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)	Percent of Total Fluence	Cumulative Fluence
1954	4.170E+04	3.247E+02	2.364E+02	0.0	0.52%	0.52%
1955	1.737E+05	5.654E+02	3.072E+02	58.1	2.16%	2.67%
1956	2.983E+05	1.005E+03	2.968E+02	68.4	3.70%	6.38%
1957	2.941E+05	9.625E+02	3.055E+02	59.7	3.65%	10.03%
1958	5.744E+05	1.791E+03	3.207E+02	44.5	7.13%	17.16%
1959	5.954E+05	1.872E+03	3.181E+02	47.2	7.39%	24.55%
1960	6.304E+05	1.920E+03	3.284E+02	36.8	7.83%	32.38%
1961	6.607E+05	1.985E+03	3.328E+02	32.4	8.20%	40.59%
1962	6.102E+05	2.007E+03	3.040E+02	61.2	7.58%	48.16%
1963	7.385E+05	2.104E+03	3.509E+02	14.3	9.17%	57.33%
1964	5.203E+05	1.664E+03	3.127E+02	52.5	6.46%	63.79%
1965	6.560E+05	2.095E+03	3.131E+02	52.1	8.14%	71.94%
1966	7.419E+05	2.252E+03	3.294E+02	35.8	9.21%	81.15%
1967	7.264E+05	2.203E+03	3.297E+02	35.5	9.02%	90.17%
1968	8.706E+04	2.428E+03	3.585E+01	329.4	1.08%	91.25%
1985	7.691E+04	1.371E+03	5.611E+01	309.1	0.95%	92.20%
1986	2.722E+05	1.089E+03	2.499E+02	115.4	3.38%	95.58%
1987	2.129E+05	8.612E+02	2.472E+02	118.0	2.64%	98.23%
1988	1.428E+05	9.434E+02	1.514E+02	213.9	1.77%	100.00%
Post-Shutdown				7915.0		
Totals	**8.054E+06**		**5.126E+03**	**1684.6**	**100.00%**	

Table 3 Power History of C-Reactor by Year

Year	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)	Percent of Total Fluence	Cumulative Fluence
1955	1.684E+05	7.124E+02	2.364E+02	0.0	0.97%	0.97%
1956	3.495E+05	1.140E+03	3.064E+02	58.8	2.01%	2.98%
1957	4.315E+05	1.404E+03	3.073E+02	58.0	2.48%	5.46%
1958	6.324E+05	1.956E+03	3.234E+02	41.9	3.64%	9.10%
1959	6.264E+05	2.001E+03	3.131E+02	52.2	3.60%	12.70%
1960	6.637E+05	2.047E+03	3.243E+02	41.0	3.82%	16.52%
1961	7.133E+05	2.161E+03	3.301E+02	35.1	4.10%	20.63%
1962	7.185E+05	2.234E+03	3.216E+02	43.6	4.13%	24.76%
1963	6.219E+05	2.117E+03	2.937E+02	71.5	3.58%	28.34%
1964	4.713E+05	1.819E+03	2.591E+02	106.2	2.71%	31.05%
1965	1.325E+05	5.373E+02	2.465E+02	118.7	0.76%	31.81%
1966	6.149E+05	2.037E+03	3.019E+02	63.4	3.54%	35.35%
1967	8.343E+05	2.466E+03	3.384E+02	26.9	4.80%	40.15%
1968	6.487E+05	2.291E+03	2.832E+02	82.0	3.73%	43.88%
1969	6.270E+05	2.288E+03	2.740E+02	91.2	3.61%	47.49%
1970	6.076E+05	2.026E+03	2.999E+02	65.3	3.50%	50.98%
1971	7.057E+05	2.236E+03	3.157E+02	49.6	4.06%	55.04%
1972	7.180E+05	2.251E+03	3.189E+02	46.4	4.13%	59.18%
1973	6.975E+05	2.170E+03	3.214E+02	43.9	4.01%	63.19%
1974	5.804E+05	1.943E+03	2.986E+02	66.6	3.34%	66.53%
1975	5.087E+05	1.817E+03	2.800E+02	85.2	2.93%	69.45%
1976	5.683E+05	1.948E+03	2.918E+02	73.4	3.27%	72.72%
1977	5.460E+05	1.777E+03	3.072E+02	58.0	3.14%	75.87%
1978	3.590E+05	1.246E+03	2.882E+02	77.0	2.07%	77.93%
1979	3.704E+05	1.468E+03	2.524E+02	112.9	2.13%	80.06%
1980	4.457E+05	1.590E+03	2.803E+02	85.0	2.56%	82.63%
1981	5.365E+05	2.004E+03	2.677E+02	97.6	3.09%	85.71%
1982	5.899E+05	1.975E+03	2.987E+02	66.6	3.39%	89.11%
1983	7.979E+05	2.431E+03	3.282E+02	37.0	4.59%	93.70%
1984	6.877E+05	2.342E+03	2.937E+02	71.6	3.96%	97.65%
1985	4.080E+05	1.263E+03	3.232E+02	42.1	2.35%	100.00%
Post-Shutdown				8991.0		
Totals	**1.738E+06**		**9225.1753**	**1968.7**	**100.00%**	

Table 4 Power History of K-Reactor by Month

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1954	**Oct**	1.691E+03	2.500E+02	6.8	0.0
1954	**Nov**	8.900E+03	3.700E+02	24.1	6.0
1954	**Dec**	8.941E+03	3.700E+02	24.2	6.8
1955	**Jan**	1.089E+04	3.700E+02	29.4	1.6
1955	**Feb**	6.400E+03	3.700E+02	17.3	10.7
1955	**Mar**	1.151E+04	4.900E+02	23.5	7.5
1955	**Apr**	1.434E+04	4.900E+02	29.3	0.7
1955	**May**	1.269E+04	5.300E+02	23.9	7.1
1955	**Jun**	1.562E+04	5.300E+02	29.5	0.5
1955	**Jul**	9.534E+03	5.300E+02	18.0	13.0
1955	**Aug**	1.466E+04	5.700E+02	25.7	5.3
1955	**Sep**	1.504E+04	6.100E+02	24.7	5.4
1955	**Oct**	1.846E+04	6.100E+02	30.3	0.7
1955	**Nov**	1.552E+04	6.500E+02	23.9	6.1
1955	**Dec**	2.088E+04	6.750E+02	30.9	0.1
1956	**Jan**	1.845E+04	7.250E+02	25.5	5.6
1956	**Feb**	1.800E+04	7.850E+02	22.9	6.1
1956	**Mar**	2.485E+04	8.450E+02	29.4	1.6
1956	**Apr**	1.936E+04	8.450E+02	22.9	7.1
1956	**May**	2.352E+04	9.050E+02	26.0	5.0
1956	**Jun**	2.099E+04	9.650E+02	21.8	8.3
1956	**Jul**	2.568E+04	1.050E+03	24.5	6.6
1956	**Aug**	2.696E+04	1.050E+03	25.7	5.3
1956	**Sep**	2.957E+04	1.170E+03	25.3	4.7
1956	**Oct**	2.945E+04	1.230E+03	23.9	7.1
1956	**Nov**	3.399E+04	1.320E+03	25.8	4.3
1956	**Dec**	3.245E+04	1.380E+03	23.5	7.5
1957	**Jan**	3.230E+04	1.295E+03	24.9	6.1
1957	**Feb**	3.292E+04	1.256E+03	26.2	1.8
1957	**Mar**	3.661E+04	1.283E+03	28.5	2.5
1957	**Apr**	3.706E+04	1.239E+03	29.9	0.1
1957	**May**	6.213E+03	1.241E+03	5.0	26.0
1957	**Aug**	1.384E+04	7.749E+02	17.9	74.1
1957	**Sep**	4.433E+04	1.482E+03	29.9	0.1
1957	**Oct**	3.885E+04	1.522E+03	25.5	5.5
1957	**Nov**	5.123E+04	1.712E+03	29.9	0.1
1957	**Dec**	3.635E+04	1.772E+03	20.5	10.5
1958	**Jan**	5.609E+04	1.914E+03	29.3	1.7
1958	**Feb**	4.039E+04	1.877E+03	21.5	6.5
1958	**Mar**	5.820E+04	1.953E+03	29.8	1.2
1958	**Apr**	4.507E+04	1.792E+03	25.1	4.9
1958	**May**	5.447E+04	1.761E+03	30.9	0.1
1958	**Jun**	3.908E+04	1.698E+03	23.0	7.0
1958	**Jul**	5.579E+04	1.800E+03	31.0	0.0

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1958	**Aug**	4.625E+04	1.640E+03	28.2	2.8
1958	**Sep**	4.844E+04	1.615E+03	30.0	0.0
1958	**Oct**	4.019E+04	1.654E+03	24.3	6.7
1958	**Nov**	4.149E+04	1.485E+03	27.9	2.1
1958	**Dec**	6.345E+04	2.084E+03	30.4	0.6
1959	**Jan**	5.603E+04	1.996E+03	28.1	2.9
1959	**Feb**	3.890E+04	1.828E+03	21.3	6.7
1959	**Mar**	5.884E+04	2.086E+03	28.2	2.8
1959	**Apr**	4.392E+04	1.883E+03	23.3	6.7
1959	**May**	5.823E+04	1.916E+03	30.4	0.6
1959	**Jun**	4.229E+04	1.814E+03	23.3	6.7
1959	**Jul**	4.796E+04	1.835E+03	26.1	4.9
1959	**Aug**	5.190E+04	1.850E+03	28.1	3.0
1959	**Sep**	4.289E+04	1.771E+03	24.2	5.8
1959	**Oct**	5.913E+04	1.907E+03	31.0	0.0
1959	**Nov**	5.232E+04	1.992E+03	26.3	3.7
1959	**Dec**	4.206E+04	1.971E+03	21.3	9.7
1960	**Jan**	6.314E+04	2.044E+03	30.9	0.1
1960	**Feb**	5.903E+04	2.043E+03	28.9	0.1
1960	**Mar**	6.238E+04	2.015E+03	31.0	0.1
1960	**Apr**	4.929E+04	1.964E+03	25.1	4.9
1960	**May**	5.503E+04	1.892E+03	29.1	1.9
1960	**Jun**	5.615E+04	1.872E+03	30.0	0.0
1960	**Jul**	5.370E+04	1.732E+03	31.0	0.0
1960	**Aug**	3.617E+04	1.741E+03	20.8	10.2
1960	**Sep**	5.110E+04	1.717E+03	29.8	0.2
1960	**Oct**	5.360E+04	1.729E+03	31.0	0.0
1960	**Nov**	5.126E+04	1.709E+03	30.0	0.0
1960	**Dec**	5.055E+04	2.077E+03	24.3	6.7
1961	**Jan**	5.567E+04	2.180E+03	25.5	5.5
1961	**Feb**	5.918E+04	2.180E+03	27.2	0.9
1961	**Mar**	5.645E+04	2.065E+03	27.3	3.7
1961	**Apr**	5.878E+04	1.959E+03	30.0	0.0
1961	**May**	5.146E+04	1.920E+03	26.8	4.2
1961	**Jun**	6.020E+04	2.007E+03	30.0	0.0
1961	**Jul**	6.050E+04	1.951E+03	31.0	0.0
1961	**Aug**	4.488E+04	1.870E+03	24.0	7.0
1961	**Sep**	6.367E+04	2.122E+03	30.0	0.0
1961	**Oct**	6.086E+04	2.141E+03	28.4	2.6
1961	**Nov**	5.529E+04	2.112E+03	26.2	3.8
1961	**Dec**	6.708E+04	2.164E+03	31.0	0.0
1962	**Jan**	6.821E+04	2.200E+03	31.0	0.0
1962	**Feb**	5.182E+04	2.087E+03	24.8	3.2
1962	**Mar**	5.729E+04	2.131E+03	26.9	4.1
1962	**Apr**	6.207E+04	2.082E+03	29.8	0.2

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1962	**May**	5.394E+04	1.809E+03	29.8	1.2
1962	**Jun**	4.271E+04	1.863E+03	22.9	7.1
1962	**Jul**	6.076E+04	2.046E+03	29.7	1.3
1962	**Aug**	5.037E+04	2.002E+03	25.2	5.8
1962	**Sep**	5.613E+04	2.065E+03	27.2	2.8
1962	**Oct**	5.693E+04	2.116E+03	26.9	4.1
1962	**Nov**	5.725E+04	2.187E+03	26.2	3.8
1962	**Dec**	6.943E+04	2.359E+03	29.4	1.6
1963	**Jan**	2.014E+03	2.417E+03	0.8	30.2
1963	**Feb**	7.164E+03	1.637E+03	4.4	23.6
1963	**Mar**	6.919E+04	2.353E+03	29.4	1.6
1963	**Apr**	5.006E+04	2.482E+03	20.2	9.8
1963	**May**	6.418E+04	2.234E+03	28.7	2.3
1963	**Jun**	4.425E+04	2.050E+03	21.6	8.4
1963	**Jul**	4.827E+04	1.980E+03	24.4	6.6
1963	**Aug**	5.683E+04	2.056E+03	27.6	3.4
1963	**Sep**	6.136E+04	2.156E+03	28.5	1.5
1963	**Oct**	4.712E+04	2.040E+03	23.1	7.9
1963	**Nov**	5.755E+04	2.240E+03	25.7	4.3
1963	**Dec**	6.298E+04	2.387E+03	26.4	4.6
1964	**Jan**	7.170E+04	2.482E+03	28.9	2.1
1964	**Feb**	5.343E+04	2.327E+03	23.0	6.0
1964	**Mar**	6.703E+04	2.366E+03	28.3	2.7
1964	**Apr**	4.618E+04	2.172E+03	21.3	8.7
1964	**May**	5.347E+04	2.382E+03	22.4	8.6
1964	**Jun**	2.010E+03	9.571E+02	2.1	27.9
1964	**Jul**	6.622E+04	2.239E+03	29.6	1.4
1964	**Aug**	4.494E+04	2.197E+03	20.5	10.6
1964	**Sep**	5.152E+04	1.933E+03	26.7	3.4
1964	**Oct**	6.857E+04	2.264E+03	30.3	0.7
1964	**Nov**	7.190E+04	2.397E+03	30.0	0.0
1964	**Dec**	5.747E+04	2.359E+03	24.4	6.6
1965	**Jan**	7.462E+04	2.477E+03	30.1	0.9
1965	**Feb**	3.747E+04	1.822E+03	20.6	7.4
1965	**Mar**	4.386E+04	1.895E+03	23.2	7.9
1965	**Apr**	4.609E+04	1.884E+03	24.5	5.5
1965	**May**	4.694E+04	1.825E+03	25.7	5.3
1965	**Jun**	5.160E+04	1.907E+03	27.1	3.0
1965	**Jul**	3.876E+04	1.750E+03	22.2	8.9
1965	**Aug**	3.794E+04	1.739E+03	21.8	9.2
1965	**Sep**	4.777E+04	1.963E+03	24.3	5.7
1965	**Oct**	6.166E+04	2.264E+03	27.2	3.8
1965	**Nov**	6.030E+04	2.328E+03	25.9	4.1
1965	**Dec**	7.303E+03	9.841E+02	7.4	23.6
1966	**Jan**	2.879E+04	1.266E+03	22.7	8.3

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1966	**Feb**	2.965E+04	1.392E+03	21.3	6.7
1966	**Mar**	3.321E+04	1.497E+03	22.2	8.8
1966	**Apr**	3.430E+04	1.481E+03	23.2	6.9
1966	**May**	3.869E+04	1.643E+03	23.6	7.5
1966	**Jun**	3.644E+04	1.588E+03	23.0	7.1
1966	**Jul**	2.917E+04	1.483E+03	19.7	11.3
1966	**Aug**	2.771E+04	1.416E+03	19.6	11.4
1966	**Sep**	2.058E+04	1.309E+03	15.7	14.3
1966	**Oct**	3.812E+04	1.689E+03	22.6	8.4
1966	**Nov**	3.991E+04	1.763E+03	22.6	7.4
1966	**Dec**	4.333E+04	1.798E+03	24.1	6.9
1967	**Jan**	3.859E+04	1.789E+03	21.6	9.4
1967	**Feb**	3.400E+04	1.726E+03	19.7	8.3
1967	**Mar**	3.363E+04	1.685E+03	20.0	11.0
1967	**Apr**	3.314E+04	1.563E+03	21.2	8.8
1967	**May**	1.638E+04	1.751E+03	9.4	21.7
1967	**Jun**	3.275E+04	1.419E+03	23.1	6.9
1967	**Jul**	3.138E+04	1.640E+03	19.1	11.9
1967	**Aug**	3.123E+04	1.593E+03	19.6	11.4
1967	**Sep**	3.932E+04	1.676E+03	23.5	6.5
1967	**Oct**	4.597E+04	1.845E+03	24.9	6.1
1967	**Nov**	4.685E+04	1.934E+03	24.2	5.8
1967	**Dec**	5.308E+04	2.053E+03	25.9	5.1
1968	**Jan**	4.491E+04	1.966E+03	22.9	8.2
1968	**Feb**	5.330E+04	2.100E+03	25.4	3.6
1968	**Mar**	4.659E+04	2.009E+03	23.2	7.8
1968	**Apr**	4.948E+04	2.105E+03	23.5	6.5
1968	**May**	6.162E+04	2.154E+03	28.6	2.4
1968	**Jun**	6.302E+04	2.251E+03	28.0	2.0
1968	**Jul**	5.666E+04	2.170E+03	26.1	4.9
1968	**Aug**	7.018E+04	2.264E+03	31.0	0.0
1968	**Sep**	2.614E+04	1.769E+03	14.8	15.2
1968	**Oct**	5.192E+04	1.813E+03	28.6	2.4
1968	**Nov**	4.410E+04	1.860E+03	23.7	6.3
1968	**Dec**	4.952E+04	1.960E+03	25.3	5.7
1969	**Jan**	5.583E+04	1.998E+03	27.9	3.1
1969	**Feb**	4.205E+04	2.025E+03	20.8	7.2
1969	**Mar**	7.015E+04	2.298E+03	30.5	0.5
1969	**Apr**	4.963E+04	2.015E+03	24.6	5.4
1969	**May**	5.467E+04	2.089E+03	26.2	4.8
1969	**Jun**	4.950E+04	1.979E+03	25.0	5.0
1969	**Jul**	1.828E+04	1.617E+03	11.3	19.7
1969	**Aug**	9.913E+03	8.509E+02	11.7	19.4
1969	**Sep**	2.583E+04	1.089E+03	23.7	6.3
1969	**Oct**	3.139E+04	1.172E+03	26.8	4.2

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1969	**Nov**	3.527E+04	1.426E+03	24.7	5.3
1969	**Dec**	3.584E+04	1.504E+03	23.8	7.2
1970	**Jan**	3.366E+04	1.352E+03	24.9	6.1
1970	**Feb**	2.951E+04	1.254E+03	23.5	4.5
1970	**Mar**	2.895E+04	1.299E+03	22.3	8.7
1970	**Apr**	3.056E+04	1.248E+03	24.5	5.5
1970	**May**	2.827E+04	1.207E+03	23.4	7.6
1970	**Jun**	3.004E+04	1.201E+03	25.0	5.0
1970	**Jul**	3.081E+04	1.202E+03	25.6	5.4
1970	**Aug**	3.125E+04	1.181E+03	26.5	4.6
1970	**Sep**	2.833E+04	1.181E+03	24.0	6.0
1970	**Oct**	2.876E+04	1.151E+03	25.0	6.0
1970	**Nov**	7.783E+03	1.102E+03	7.1	22.9
1971	**Mar**	2.404E+04	1.452E+03	16.6	104.5
1971	**Apr**	4.766E+04	1.707E+03	27.9	2.1
1971	**May**	4.481E+04	1.724E+03	26.0	5.0
1971	**Jun**	4.088E+04	1.781E+03	23.0	7.1
1971	**Jul**	4.181E+04	1.974E+03	21.2	9.8
1971	**Aug**	3.683E+04	1.537E+03	24.0	7.0
1971	**Sep**	4.639E+04	1.743E+03	26.6	3.4
1971	**Oct**	4.887E+04	1.870E+03	26.1	4.9
1971	**Nov**	3.194E+04	1.780E+03	18.0	12.1
1971	**Dec**	4.740E+04	1.801E+03	26.3	4.7
1972	**Jan**	5.485E+04	2.039E+03	26.9	4.1
1972	**Feb**	3.115E+04	1.913E+03	16.3	12.7
1972	**Mar**	4.377E+04	1.731E+03	25.3	5.7
1972	**Apr**	5.305E+04	1.828E+03	29.0	1.0
1972	**May**	5.040E+04	1.740E+03	29.0	2.0
1972	**Jun**	3.774E+04	1.716E+03	22.0	8.0
1972	**Jul**	1.285E+04	1.525E+03	8.4	22.6
1972	**Aug**	6.806E+04	2.195E+03	31.0	0.0
1972	**Sep**	5.958E+04	2.112E+03	28.2	1.8
1972	**Oct**	4.727E+04	1.741E+03	27.2	3.9
1972	**Nov**	5.400E+04	1.800E+03	30.0	0.0
1972	**Dec**	3.493E+04	1.745E+03	20.0	11.0
1973	**Jan**	6.187E+04	2.207E+03	28.0	3.0
1973	**Feb**	5.009E+04	2.225E+03	22.5	5.5
1973	**Mar**	1.773E+04	1.315E+03	13.5	17.5
1973	**Apr**	5.626E+04	1.941E+03	29.0	1.0
1973	**May**	4.926E+04	1.839E+03	26.8	4.2
1973	**Jun**	4.921E+04	1.780E+03	27.7	2.4
1973	**Jul**	4.678E+04	1.734E+03	27.0	4.0
1973	**Aug**	4.816E+04	1.601E+03	30.1	0.9
1973	**Sep**	5.295E+04	1.769E+03	29.9	0.1
1973	**Oct**	3.528E+04	1.579E+03	22.3	8.7

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1973	**Nov**	6.006E+04	2.002E+03	30.0	0.0
1973	**Dec**	5.205E+04	2.005E+03	26.0	5.0
1974	**Jan**	6.273E+04	2.082E+03	30.1	0.9
1974	**Feb**	4.236E+04	1.846E+03	23.0	5.1
1974	**Mar**	5.654E+04	2.017E+03	28.0	3.0
1974	**Apr**	1.846E+04	1.580E+03	11.7	18.3
1974	**May**	6.604E+04	2.182E+03	30.3	0.7
1974	**Jun**	6.098E+04	2.116E+03	28.8	1.2
1974	**Jul**	5.515E+04	2.123E+03	26.0	5.0
1974	**Aug**	4.464E+04	1.604E+03	27.8	3.2
1974	**Sep**	2.302E+04	1.625E+03	14.2	15.8
1974	**Oct**	4.092E+04	1.657E+03	24.7	6.3
1974	**Nov**	5.529E+04	1.843E+03	30.0	0.0
1974	**Dec**	6.067E+04	1.957E+03	31.0	0.0
1975	**Jan**	4.652E+04	1.815E+03	25.6	5.4
1975	**Mar**	2.624E+04	1.856E+03	14.1	44.9
1975	**Apr**	1.331E+04	1.223E+03	10.9	19.1
1975	**May**	4.891E+04	1.822E+03	26.9	4.2
1975	**Jun**	4.124E+04	1.914E+03	21.6	8.5
1975	**Jul**	1.141E+04	1.131E+03	10.1	20.9
1975	**Aug**	5.427E+04	1.751E+03	31.0	0.0
1975	**Sep**	5.321E+04	1.935E+03	27.5	2.5
1975	**Oct**	3.781E+04	1.621E+03	23.3	7.7
1975	**Nov**	4.660E+04	1.830E+03	25.5	4.5
1975	**Dec**	3.972E+04	1.607E+03	24.7	6.3
1976	**Jan**	3.995E+04	1.701E+03	23.5	7.5
1976	**Feb**	2.791E+04	1.633E+03	17.1	11.9
1976	**Mar**	5.641E+04	1.872E+03	30.1	0.9
1976	**Apr**	3.471E+04	1.764E+03	19.7	10.3
1976	**May**	5.595E+04	1.859E+03	30.1	0.9
1976	**Jun**	4.388E+04	1.734E+03	25.3	4.7
1976	**Jul**	4.713E+04	1.626E+03	29.0	2.0
1976	**Aug**	4.084E+04	1.654E+03	24.7	6.3
1976	**Sep**	4.630E+04	1.543E+03	30.0	0.0
1976	**Oct**	2.715E+04	1.613E+03	16.8	14.2
1976	**Dec**	2.509E+04	1.668E+03	15.0	46.0
1977	**Jan**	5.854E+04	1.954E+03	30.0	1.1
1977	**Feb**	3.175E+04	1.815E+03	17.5	10.5
1977	**Mar**	5.641E+04	1.980E+03	28.5	2.5
1977	**Apr**	4.423E+04	1.914E+03	23.1	6.9
1977	**May**	4.852E+04	1.820E+03	26.7	4.3
1977	**Jun**	2.894E+04	1.562E+03	18.5	11.5
1977	**Jul**	4.603E+04	1.662E+03	27.7	3.3
1977	**Aug**	3.418E+04	1.726E+03	19.8	11.2
1977	**Nov**	1.456E+04	1.510E+03	9.6	81.4

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1977	**Dec**	4.747E+04	1.858E+03	25.6	5.5
1978	**Jan**	3.956E+04	2.069E+03	19.1	11.9
1978	**Feb**	5.247E+04	1.934E+03	27.1	0.9
1978	**Mar**	5.761E+04	2.157E+03	26.7	4.3
1978	**Apr**	3.496E+04	1.646E+03	21.2	8.8
1978	**May**	5.917E+04	1.967E+03	30.1	0.9
1978	**Jun**	1.772E+04	1.392E+03	12.7	17.3
1978	**Jul**	4.263E+04	1.666E+03	25.6	5.4
1978	**Aug**	2.438E+04	1.920E+03	12.7	18.3
1978	**Sep**	3.982E+04	1.735E+03	23.0	7.1
1978	**Oct**	5.968E+04	2.020E+03	29.5	1.5
1978	**Dec**	1.724E+04	1.496E+03	11.5	49.5
1979	**Jan**	6.575E+04	2.121E+03	31.0	0.0
1979	**Feb**	2.554E+04	1.970E+03	13.0	15.0
1979	**Mar**	6.218E+04	2.006E+03	31.0	0.0
1979	**Apr**	3.774E+04	2.006E+03	18.8	11.2
1979	**May**	5.735E+04	1.850E+03	31.0	0.0
1979	**Jun**	2.982E+04	1.939E+03	15.4	14.6
1979	**Sep**	2.987E+04	1.552E+03	19.3	72.8
1979	**Oct**	4.888E+04	1.925E+03	25.4	5.6
1979	**Nov**	3.296E+04	2.029E+03	16.2	13.8
1979	**Dec**	3.491E+04	1.948E+03	17.9	13.1
1980	**Jan**	6.614E+04	2.190E+03	30.2	0.8
1980	**Feb**	3.357E+04	1.829E+03	18.4	10.7
1980	**Mar**	5.782E+04	2.129E+03	27.2	3.8
1980	**Apr**	4.142E+04	1.941E+03	21.3	8.7
1980	**May**	5.405E+04	2.095E+03	25.8	5.2
1980	**Jun**	1.136E+03	7.616E+02	1.5	28.5
1980	**Jul**	5.261E+04	1.904E+03	27.6	3.4
1980	**Aug**	5.207E+04	2.104E+03	24.8	6.3
1980	**Sep**	5.218E+04	1.981E+03	26.3	3.7
1980	**Oct**	5.740E+04	2.225E+03	25.8	5.2
1980	**Nov**	3.722E+04	1.913E+03	19.5	10.5
1980	**Dec**	5.879E+04	2.305E+03	25.5	5.5
1981	**Jan**	4.855E+04	2.077E+03	23.4	7.6
1981	**Feb**	3.755E+04	2.384E+03	15.8	12.3
1981	**Apr**	3.700E+01	1.889E+02	0.2	60.8
1981	**May**	5.219E+04	2.080E+03	25.1	5.9
1981	**Jun**	5.033E+04	2.101E+03	24.0	6.1
1981	**Jul**	5.665E+04	2.022E+03	28.0	3.0
1981	**Aug**	5.345E+04	2.064E+03	25.9	5.1
1981	**Sep**	4.844E+04	2.076E+03	23.3	6.7
1981	**Oct**	6.331E+04	2.172E+03	29.1	1.9
1981	**Nov**	6.052E+04	2.294E+03	26.4	3.6
1981	**Dec**	7.730E+04	2.493E+03	31.0	0.0

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1982	**Jan**	5.828E+03	2.412E+03	2.4	28.6
1982	**Mar**	6.998E+04	2.260E+03	31.0	28.0
1982	**Apr**	7.071E+04	2.360E+03	30.0	0.0
1982	**May**	6.585E+04	2.196E+03	30.0	1.0
1982	**Jun**	6.059E+04	2.167E+03	28.0	2.0
1982	**Jul**	6.310E+04	2.122E+03	29.7	1.3
1982	**Aug**	6.686E+04	2.157E+03	31.0	0.0
1982	**Sep**	5.835E+04	2.123E+03	27.5	2.5
1982	**Oct**	2.520E+04	1.912E+03	13.2	17.8
1982	**Nov**	6.792E+04	2.311E+03	29.4	0.6
1982	**Dec**	7.040E+04	2.434E+03	28.9	2.1
1983	**Jan**	7.818E+04	2.643E+03	29.6	1.4
1983	**Feb**	4.415E+04	2.500E+03	17.7	10.3
1983	**Mar**	6.642E+04	2.528E+03	26.3	4.7
1983	**Apr**	6.550E+04	2.365E+03	27.7	2.3
1983	**May**	7.198E+04	2.322E+03	31.0	0.0
1983	**Jun**	1.973E+04	2.263E+03	8.7	21.3
1983	**Aug**	5.786E+04	1.992E+03	29.1	33.0
1983	**Sep**	3.022E+04	2.108E+03	14.3	15.7
1983	**Oct**	5.601E+04	2.196E+03	25.5	5.5
1983	**Nov**	5.721E+04	2.304E+03	24.8	5.2
1983	**Dec**	6.301E+04	2.441E+03	25.8	5.2
1984	**Jan**	5.663E+04	2.514E+03	22.5	8.5
1984	**Feb**	5.012E+04	2.531E+03	19.8	9.2
1984	**Mar**	4.550E+04	2.357E+03	19.3	11.7
1984	**Apr**	5.459E+04	2.289E+03	23.9	6.2
1984	**May**	5.047E+04	2.366E+03	21.3	9.7
1984	**Jun**	3.506E+04	1.997E+03	17.6	12.5
1984	**Jul**	4.685E+04	2.142E+03	21.9	9.1
1984	**Aug**	5.298E+04	2.180E+03	24.3	6.7
1984	**Sep**	6.711E+04	2.237E+03	30.0	0.0
1984	**Oct**	4.120E+04	2.055E+03	20.1	11.0
1984	**Nov**	1.840E+02	2.208E+03	0.1	29.9
1984	**Dec**	4.745E+04	2.264E+03	21.0	10.0
1985	**Jan**	5.657E+04	2.433E+03	23.3	7.8
1985	**Feb**	4.865E+04	2.389E+03	20.4	7.6
1985	**Mar**	5.509E+04	2.353E+03	23.4	7.6
1985	**Apr**	4.770E+04	2.164E+03	22.0	8.0
1985	**May**	5.021E+04	2.234E+03	22.5	8.5
1985	**Jun**	3.675E+04	2.250E+03	16.3	13.7
1985	**Jul**	5.642E+04	2.088E+03	27.0	4.0
1985	**Aug**	5.062E+04	2.106E+03	24.0	7.0
1985	**Sep**	4.686E+04	2.180E+03	21.5	8.5
1985	**Oct**	4.630E+04	2.115E+03	21.9	9.1
1985	**Nov**	4.352E+04	2.152E+03	20.2	9.8

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1985	**Dec**	7.102E+04	2.435E+03	29.2	1.8
1986	**Jan**	1.345E+04	2.604E+03	5.2	25.8
1986	**Mar**	3.220E+04	2.054E+03	15.7	43.3
1986	**Apr**	3.639E+04	2.066E+03	17.6	12.4
1986	**May**	5.361E+04	2.175E+03	24.7	6.4
1986	**Jun**	4.724E+04	2.069E+03	22.8	7.2
1986	**Jul**	2.889E+04	1.683E+03	17.2	13.8
1986	**Aug**	1.305E+04	2.088E+03	6.3	24.8
1986	**Sep**	5.386E+04	2.122E+03	25.4	4.6
1986	**Oct**	5.614E+04	2.146E+03	26.2	4.8
1986	**Nov**	6.931E+04	2.369E+03	29.3	0.8
1987	**Mar**	2.481E+04	1.508E+03	16.5	104.6
1987	**Apr**	4.166E+04	1.391E+03	30.0	0.0
1987	**May**	3.802E+04	1.227E+03	31.0	0.0
1987	**Jun**	2.245E+04	1.101E+03	20.4	9.6
1987	**Jul**	3.335E+04	1.121E+03	29.8	1.2
1987	**Aug**	3.531E+04	1.139E+03	31.0	0.0
1987	**Sep**	1.832E+04	1.066E+03	17.2	12.8
1987	**Oct**	2.856E+04	1.074E+03	26.6	4.4
1987	**Nov**	2.644E+04	1.171E+03	22.6	7.4
1987	**Dec**	4.113E+04	1.327E+03	31.0	0.0
1988	**Jan**	3.499E+04	1.330E+03	26.3	4.7
1988	**Feb**	3.777E+04	1.375E+03	27.5	1.5
1988	**Mar**	4.298E+04	1.386E+03	31.0	0.0
1988	**Apr**	1.260E+04	1.381E+03	9.1	20.9
1992	**Jun**	7.400E+02	1.363E+02	5.4	1516.6
1992	**Jul**	5.988E+03	2.754E+02	21.8	9.3
Final Decay Through December 31, 2009					6417.2

Table 5 Power History of L-Reactor by Month

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1954	**Jul**	8.000E+01	1.000E+02	0.8	0.0
1954	**Aug**	4.350E+03	3.350E+02	13.0	18.0
1954	**Sep**	1.019E+04	3.700E+02	27.5	2.5
1954	**Oct**	9.953E+03	3.700E+02	26.9	4.1
1954	**Nov**	4.802E+03	3.700E+02	13.0	17.0
1954	**Dec**	1.233E+04	4.030E+02	30.6	0.4
1955	**Jan**	1.370E+04	4.500E+02	30.5	0.6
1955	**Feb**	6.260E+03	4.500E+02	13.9	14.1
1955	**Mar**	1.412E+04	4.900E+02	28.8	2.2
1955	**Apr**	1.441E+04	4.900E+02	29.4	0.6
1955	**May**	1.146E+04	5.300E+02	21.6	9.4
1955	**Jun**	1.590E+04	5.300E+02	30.0	0.0
1955	**Jul**	8.788E+03	6.100E+02	14.4	16.6
1955	**Aug**	1.834E+04	6.100E+02	30.1	0.9
1955	**Sep**	1.592E+04	6.500E+02	24.5	5.5
1955	**Oct**	1.939E+04	6.500E+02	29.8	1.2
1955	**Nov**	1.665E+04	6.500E+02	25.6	4.4
1955	**Dec**	1.874E+04	6.750E+02	27.8	3.2
1956	**Jan**	2.220E+04	7.250E+02	30.6	0.4
1956	**Feb**	1.751E+04	8.450E+02	20.7	8.3
1956	**Mar**	2.514E+04	9.650E+02	26.1	5.0
1956	**Apr**	1.960E+04	9.650E+02	20.3	9.7
1956	**May**	3.007E+04	1.100E+03	27.3	3.7
1956	**Jun**	2.469E+04	1.100E+03	22.5	7.6
1956	**Jul**	2.814E+04	1.100E+03	25.6	5.4
1956	**Aug**	2.955E+04	1.100E+03	26.9	4.1
1956	**Sep**	1.808E+04	8.300E+02	21.8	8.2
1956	**Oct**	2.713E+04	1.010E+03	26.9	4.1
1956	**Nov**	3.119E+04	1.130E+03	27.6	2.4
1956	**Dec**	2.500E+04	1.190E+03	21.0	10.0
1957	**Jan**	3.754E+04	1.215E+03	30.9	0.1
1957	**Feb**	3.500E+04	1.250E+03	28.0	0.0
1957	**Mar**	3.122E+04	1.194E+03	26.2	4.9
1957	**Apr**	3.710E+04	1.237E+03	30.0	0.0
1957	**May**	3.117E+04	1.199E+03	26.0	5.0
1957	**Jun**	3.545E+04	1.182E+03	30.0	0.0
1957	**Jul**	2.635E+04	1.036E+03	25.4	5.6
1957	**Aug**	3.216E+04	1.096E+03	29.4	1.7
1957	**Sep**	2.042E+03	1.021E+03	2.0	28.0
1957	**Dec**	2.603E+04	1.121E+03	23.2	68.8
1958	**Jan**	3.984E+04	1.654E+03	24.1	6.9
1958	**Feb**	3.669E+04	1.753E+03	20.9	7.1
1958	**Mar**	6.163E+04	1.988E+03	31.0	0.0
1958	**Apr**	3.537E+04	1.785E+03	19.8	10.2
1958	**May**	5.924E+04	1.911E+03	31.0	0.0

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1958	**Jun**	4.479E+04	1.783E+03	25.1	4.9
1958	**Jul**	5.491E+04	1.774E+03	31.0	0.0
1958	**Aug**	4.025E+04	1.613E+03	25.0	6.0
1958	**Sep**	4.950E+04	1.650E+03	30.0	0.0
1958	**Oct**	4.435E+04	1.718E+03	25.8	5.2
1958	**Nov**	5.755E+04	1.918E+03	30.0	0.0
1958	**Dec**	5.031E+04	1.945E+03	25.9	5.1
1959	**Jan**	5.863E+04	2.018E+03	29.1	2.0
1959	**Feb**	4.195E+04	1.967E+03	21.3	6.7
1959	**Mar**	5.695E+04	2.142E+03	26.6	4.4
1959	**Apr**	3.768E+04	1.866E+03	20.2	9.8
1959	**May**	3.425E+04	1.782E+03	19.2	11.8
1959	**Jun**	4.816E+04	1.764E+03	27.3	2.7
1959	**Jul**	5.281E+04	1.717E+03	30.8	0.3
1959	**Aug**	5.434E+04	1.753E+03	31.0	0.0
1959	**Sep**	5.156E+04	1.719E+03	30.0	0.0
1959	**Oct**	3.965E+04	1.735E+03	22.9	8.2
1959	**Nov**	6.043E+04	2.014E+03	30.0	0.0
1959	**Dec**	5.904E+04	1.988E+03	29.7	1.3
1960	**Jan**	4.693E+04	1.893E+03	24.8	6.2
1960	**Feb**	6.227E+04	2.155E+03	28.9	0.1
1960	**Mar**	6.641E+04	2.142E+03	31.0	0.0
1960	**Apr**	5.271E+04	1.925E+03	27.4	2.6
1960	**May**	4.360E+04	1.812E+03	24.1	6.9
1960	**Jun**	5.722E+04	1.907E+03	30.0	0.0
1960	**Jul**	5.698E+04	1.838E+03	31.0	0.0
1960	**Aug**	5.386E+04	1.737E+03	31.0	0.0
1960	**Sep**	3.447E+04	1.559E+03	22.1	7.9
1960	**Oct**	6.115E+04	1.973E+03	31.0	0.0
1960	**Nov**	4.066E+04	1.999E+03	20.3	9.7
1960	**Dec**	5.418E+04	2.096E+03	25.9	5.2
1961	**Jan**	6.528E+04	2.106E+03	31.0	0.0
1961	**Feb**	4.771E+04	1.953E+03	24.4	3.6
1961	**Mar**	4.922E+04	2.064E+03	23.9	7.2
1961	**Apr**	5.835E+04	2.171E+03	26.9	3.1
1961	**May**	5.645E+04	1.913E+03	29.5	1.5
1961	**Jun**	4.496E+04	1.806E+03	24.9	5.1
1961	**Jul**	6.071E+04	1.958E+03	31.0	0.0
1961	**Aug**	5.582E+04	1.864E+03	30.0	1.1
1961	**Sep**	5.615E+04	1.908E+03	29.4	0.6
1961	**Oct**	4.451E+04	1.908E+03	23.3	7.7
1961	**Nov**	5.500E+04	2.027E+03	27.1	2.9
1961	**Dec**	6.657E+04	2.147E+03	31.0	0.0
1962	**Jan**	5.855E+04	2.084E+03	28.1	2.9
1962	**Feb**	3.584E+04	1.775E+03	20.2	7.8
1962	**Mar**	7.108E+04	2.306E+03	30.8	0.2
1962	**Apr**	6.709E+04	2.246E+03	29.9	0.1

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1962	**May**	6.490E+04	2.102E+03	30.9	0.1
1962	**Jun**	5.993E+04	2.067E+03	29.0	1.0
1962	**Jul**	6.196E+04	1.999E+03	31.0	0.0
1962	**Aug**	4.966E+04	1.934E+03	25.7	5.3
1962	**Sep**	6.331E+04	2.110E+03	30.0	0.0
1962	**Oct**	5.803E+03	2.146E+03	2.7	28.3
1962	**Nov**	9.892E+03	1.255E+03	7.9	22.1
1962	**Dec**	6.218E+04	2.060E+03	30.2	0.8
1963	**Jan**	7.059E+04	2.277E+03	31.0	0.0
1963	**Feb**	6.542E+04	2.337E+03	28.0	0.0
1963	**Mar**	7.086E+04	2.286E+03	31.0	0.0
1963	**Apr**	5.719E+04	2.213E+03	25.9	4.2
1963	**May**	6.804E+04	2.195E+03	31.0	0.0
1963	**Jun**	4.069E+04	1.812E+03	22.5	7.6
1963	**Jul**	6.046E+04	1.950E+03	31.0	0.0
1963	**Aug**	6.060E+04	1.955E+03	31.0	0.0
1963	**Sep**	6.023E+04	2.008E+03	30.0	0.0
1963	**Oct**	6.000E+04	1.994E+03	30.1	0.9
1963	**Nov**	6.120E+04	2.069E+03	29.6	0.4
1963	**Dec**	6.325E+04	2.159E+03	29.3	1.7
1964	**Jan**	3.917E+04	1.955E+03	20.0	11.0
1964	**Feb**	6.075E+04	2.220E+03	27.4	1.6
1964	**Mar**	5.642E+04	2.148E+03	26.3	4.7
1964	**Apr**	5.297E+04	2.087E+03	25.4	4.6
1964	**May**	5.780E+04	2.000E+03	28.9	2.1
1964	**Jun**	5.616E+04	1.891E+03	29.7	0.3
1964	**Jul**	3.920E+04	1.785E+03	22.0	9.1
1964	**Aug**	5.129E+04	1.944E+03	26.4	4.6
1964	**Sep**	5.168E+04	2.020E+03	25.6	4.4
1964	**Dec**	5.490E+04	1.915E+03	28.7	63.3
1965	**Jan**	5.355E+04	2.144E+03	25.0	6.0
1965	**Feb**	5.391E+04	2.039E+03	26.4	1.6
1965	**Mar**	5.003E+04	2.049E+03	24.4	6.6
1965	**Apr**	4.885E+04	2.061E+03	23.7	6.3
1965	**May**	5.469E+04	2.175E+03	25.1	5.9
1965	**Jun**	6.035E+04	2.128E+03	28.4	1.6
1965	**Jul**	6.514E+04	2.110E+03	30.9	0.1
1965	**Aug**	6.025E+04	2.026E+03	29.7	1.3
1965	**Sep**	5.078E+04	2.057E+03	24.7	5.3
1965	**Oct**	6.223E+04	2.147E+03	29.0	2.0
1965	**Nov**	6.003E+04	2.260E+03	26.6	3.4
1965	**Dec**	3.615E+04	1.941E+03	18.6	12.4
1966	**Jan**	6.666E+04	2.458E+03	27.1	3.9
1966	**Feb**	6.590E+04	2.436E+03	27.1	1.0
1966	**Mar**	5.062E+04	2.544E+03	19.9	11.1
1966	**Apr**	5.644E+04	2.220E+03	25.4	4.6
1966	**May**	6.689E+04	2.282E+03	29.3	1.7

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1966	**Jun**	4.178E+04	2.049E+03	20.4	9.6
1966	**Jul**	6.490E+04	2.093E+03	31.0	0.0
1966	**Aug**	5.947E+04	2.043E+03	29.1	1.9
1966	**Sep**	6.324E+04	2.108E+03	30.0	0.0
1966	**Oct**	6.776E+04	2.186E+03	31.0	0.0
1966	**Nov**	6.837E+04	2.279E+03	30.0	0.0
1966	**Dec**	6.988E+04	2.329E+03	30.0	1.0
1967	**Jan**	6.406E+04	2.338E+03	27.4	3.6
1967	**Feb**	4.865E+04	2.290E+03	21.2	6.8
1967	**Mar**	6.185E+04	2.294E+03	27.0	4.0
1967	**Apr**	6.852E+04	2.287E+03	30.0	0.0
1967	**May**	5.577E+04	2.008E+03	27.8	3.2
1967	**Jun**	4.683E+04	1.842E+03	25.4	4.6
1967	**Jul**	5.109E+04	2.026E+03	25.2	5.8
1967	**Aug**	6.535E+04	2.171E+03	30.1	0.9
1967	**Sep**	6.715E+04	2.238E+03	30.0	0.0
1967	**Oct**	5.631E+04	2.191E+03	25.7	5.3
1967	**Nov**	6.650E+04	2.353E+03	28.3	1.8
1967	**Dec**	7.437E+04	2.399E+03	31.0	0.0
1968	**Jan**	4.097E+04	2.266E+03	18.1	12.9
1968	**Feb**	4.609E+04	2.591E+03	17.8	11.2
1985	**Oct**	2.200E+01	8.949E+01	0.3	6453.8
1985	**Nov**	4.366E+04	1.701E+03	25.7	4.3
1985	**Dec**	3.324E+04	2.321E+03	14.3	16.7
1986	**Jan**	5.302E+04	2.408E+03	22.0	9.0
1986	**Feb**	2.307E+04	2.322E+03	9.9	18.1
1986	**Mar**	4.504E+04	2.332E+03	19.3	11.7
1986	**Apr**	5.650E+04	2.110E+03	26.8	3.2
1986	**May**	3.814E+04	1.590E+03	24.0	7.0
1986	**Jun**	1.618E+04	6.295E+02	25.7	4.3
1986	**Dec**	4.022E+04	1.680E+03	24.0	160.1
1987	**Jan**	2.108E+04	1.724E+03	12.2	18.8
1987	**Feb**	4.569E+04	1.910E+03	23.9	4.1
1987	**Mar**	2.943E+04	1.461E+03	20.2	10.9
1987	**Apr**	3.061E+04	1.035E+03	29.6	0.4
1987	**May**	1.403E+04	7.364E+02	19.1	12.0
1987	**Jun**	2.012E+04	6.912E+02	29.1	0.9
1987	**Jul**	3.484E+03	6.402E+02	5.4	25.6
1987	**Nov**	1.233E+04	9.713E+02	12.7	109.3
1987	**Dec**	3.613E+04	1.166E+03	31.0	0.0
1988	**Jan**	2.429E+04	1.112E+03	21.9	9.2
1988	**Feb**	2.955E+04	1.077E+03	27.5	1.6
1988	**Mar**	2.255E+04	9.720E+02	23.2	7.8
1988	**Apr**	2.315E+04	8.856E+02	26.1	3.9
1988	**May**	2.580E+04	8.748E+02	29.5	1.5
1988	**Jun**	1.749E+04	7.400E+02	23.6	6.4
Final Decay Through December 31, 2009					7915.2

Table 6 Power History of C-Reactor by Month

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1955	**Apr**	9.009E+03	4.500E+02	20.0	0.0
1955	**May**	1.727E+04	6.150E+02	28.1	2.9
1955	**Jun**	1.365E+04	6.150E+02	22.2	7.8
1955	**Jul**	2.074E+04	7.000E+02	29.6	1.4
1955	**Aug**	1.642E+04	7.200E+02	22.8	8.2
1955	**Sep**	2.215E+04	7.950E+02	27.9	2.1
1955	**Oct**	2.048E+04	7.950E+02	25.8	5.2
1955	**Nov**	2.482E+04	8.450E+02	29.4	0.6
1955	**Dec**	2.386E+04	8.770E+02	27.2	3.8
1956	**Jan**	2.337E+04	8.750E+02	26.7	4.3
1956	**Feb**	2.626E+04	9.450E+02	27.8	1.2
1956	**Mar**	2.536E+04	1.010E+03	25.1	5.9
1956	**Apr**	2.386E+04	1.010E+03	23.6	6.4
1956	**May**	2.753E+04	1.075E+03	25.6	5.4
1956	**Jun**	3.202E+04	1.160E+03	27.6	2.4
1956	**Jul**	2.970E+04	1.200E+03	24.8	6.3
1956	**Aug**	3.059E+04	1.180E+03	25.9	5.1
1956	**Sep**	3.060E+04	1.230E+03	24.9	5.1
1956	**Oct**	3.349E+04	1.300E+03	25.8	5.2
1956	**Nov**	3.299E+04	1.350E+03	24.4	5.6
1956	**Dec**	3.369E+04	1.350E+03	25.0	6.0
1957	**Mar**	1.977E+04	9.119E+02	21.7	68.3
1957	**Apr**	4.186E+04	1.458E+03	28.7	1.3
1957	**May**	4.488E+04	1.729E+03	26.0	5.1
1957	**Jun**	5.043E+04	1.759E+03	28.7	1.3
1957	**Jul**	4.674E+04	1.793E+03	26.1	4.9
1957	**Aug**	2.745E+04	1.735E+03	15.8	15.2
1957	**Sep**	4.914E+04	1.766E+03	27.8	2.2
1957	**Oct**	3.500E+04	1.635E+03	21.4	9.6
1957	**Nov**	5.450E+04	1.926E+03	28.3	1.7
1957	**Dec**	6.169E+04	2.136E+03	28.9	2.1
1958	**Jan**	5.244E+04	2.087E+03	25.1	5.9
1958	**Feb**	5.710E+04	2.169E+03	26.3	1.7
1958	**Mar**	5.080E+04	2.080E+03	24.4	6.6
1958	**Apr**	5.476E+04	1.916E+03	28.6	1.4
1958	**May**	5.113E+04	1.876E+03	27.3	3.8
1958	**Jun**	3.866E+04	1.706E+03	22.7	7.3
1958	**Jul**	5.445E+04	1.819E+03	29.9	1.1
1958	**Aug**	5.290E+04	1.867E+03	28.3	2.7
1958	**Sep**	4.599E+04	1.854E+03	24.8	5.2
1958	**Oct**	6.047E+04	1.950E+03	31.0	0.0
1958	**Nov**	4.894E+04	1.965E+03	24.9	5.1
1958	**Dec**	6.478E+04	2.180E+03	29.7	1.3
1959	**Jan**	5.521E+04	2.204E+03	25.1	6.0

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1959	**Feb**	5.866E+04	2.140E+03	27.4	0.6
1959	**Mar**	5.225E+04	2.123E+03	24.6	6.4
1959	**Apr**	5.046E+04	2.015E+03	25.0	5.0
1959	**May**	3.969E+04	1.853E+03	21.4	9.6
1959	**Jun**	5.294E+04	1.911E+03	27.7	2.3
1959	**Jul**	4.776E+04	1.817E+03	26.3	4.7
1959	**Aug**	5.870E+04	1.893E+03	31.0	0.0
1959	**Sep**	4.770E+04	1.889E+03	25.3	4.7
1959	**Oct**	5.352E+04	1.970E+03	27.2	3.8
1959	**Nov**	4.146E+04	1.952E+03	21.2	8.8
1959	**Dec**	6.802E+04	2.240E+03	30.4	0.6
1960	**Jan**	4.973E+04	2.144E+03	23.2	7.8
1960	**Feb**	6.362E+04	2.292E+03	27.8	1.3
1960	**Mar**	6.463E+04	2.294E+03	28.2	2.8
1960	**Apr**	5.515E+04	2.142E+03	25.8	4.3
1960	**May**	6.141E+04	1.989E+03	30.9	0.1
1960	**Jun**	5.027E+04	1.805E+03	27.9	2.2
1960	**Jul**	5.380E+04	1.816E+03	29.6	1.4
1960	**Aug**	4.212E+04	1.793E+03	23.5	7.5
1960	**Sep**	5.402E+04	1.900E+03	28.4	1.6
1960	**Oct**	5.864E+04	1.997E+03	29.4	1.6
1960	**Nov**	5.138E+04	2.087E+03	24.6	5.4
1960	**Dec**	5.893E+04	2.303E+03	25.6	5.4
1961	**Jan**	7.004E+04	2.370E+03	29.6	1.5
1961	**Feb**	5.437E+04	2.326E+03	23.4	4.6
1961	**Mar**	6.874E+04	2.302E+03	29.9	1.1
1961	**Apr**	6.736E+04	2.245E+03	30.0	0.0
1961	**May**	6.399E+04	2.064E+03	31.0	0.0
1961	**Jun**	5.011E+04	2.042E+03	24.5	5.5
1961	**Jul**	5.594E+04	2.066E+03	27.1	3.9
1961	**Aug**	5.138E+04	1.955E+03	26.3	4.7
1961	**Sep**	5.679E+04	1.978E+03	28.7	1.3
1961	**Oct**	4.670E+04	2.002E+03	23.3	7.7
1961	**Nov**	6.133E+04	2.268E+03	27.0	3.0
1961	**Dec**	6.657E+04	2.312E+03	28.8	2.2
1962	**Jan**	6.355E+04	2.389E+03	26.6	4.4
1962	**Feb**	6.826E+04	2.438E+03	28.0	0.0
1962	**Mar**	5.780E+04	2.333E+03	24.8	6.2
1962	**Apr**	5.983E+04	2.294E+03	26.1	3.9
1962	**May**	6.803E+04	2.289E+03	29.7	1.3
1962	**Jun**	4.881E+04	2.064E+03	23.7	6.4
1962	**Jul**	5.846E+04	2.079E+03	28.1	2.9
1962	**Aug**	3.229E+04	1.901E+03	17.0	14.0
1962	**Sep**	6.533E+04	2.178E+03	30.0	0.0
1962	**Oct**	5.571E+04	2.160E+03	25.8	5.2

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1962	**Nov**	6.641E+04	2.296E+03	28.9	1.1
1962	**Dec**	7.404E+04	2.388E+03	31.0	0.0
1963	**Jan**	6.044E+04	2.292E+03	26.4	4.6
1963	**Feb**	7.094E+04	2.534E+03	28.0	0.0
1963	**Mar**	5.997E+04	2.383E+03	25.2	5.8
1963	**Apr**	6.058E+04	2.171E+03	27.9	2.1
1963	**May**	4.890E+02	7.475E+02	0.7	30.4
1963	**Jun**	4.941E+04	1.937E+03	25.5	4.5
1963	**Jul**	6.695E+04	2.160E+03	31.0	0.0
1963	**Aug**	5.358E+04	2.060E+03	26.0	5.0
1963	**Sep**	6.134E+04	2.184E+03	28.1	1.9
1963	**Oct**	4.837E+04	2.121E+03	22.8	8.2
1963	**Nov**	6.751E+04	2.345E+03	28.8	1.2
1963	**Dec**	2.235E+04	2.473E+03	9.0	22.0
1964	**Feb**	3.572E+04	2.171E+03	16.5	43.6
1964	**Mar**	6.626E+04	2.403E+03	27.6	3.4
1964	**Apr**	4.726E+04	2.518E+03	18.8	11.2
1964	**May**	4.335E+04	1.598E+03	27.1	3.9
1964	**Jun**	3.309E+04	1.839E+03	18.0	12.0
1964	**Jul**	4.456E+04	1.884E+03	23.7	7.3
1964	**Aug**	4.231E+04	1.917E+03	22.1	8.9
1964	**Sep**	4.616E+04	2.007E+03	23.0	7.0
1964	**Oct**	4.989E+04	1.908E+03	26.2	4.9
1964	**Nov**	3.975E+04	1.862E+03	21.4	8.7
1964	**Dec**	2.291E+04	1.722E+03	13.3	17.7
1965	**Feb**	6.354E+03	3.792E+02	16.8	42.2
1965	**Mar**	1.113E+04	5.881E+02	18.9	12.1
1965	**Apr**	9.696E+03	5.746E+02	16.9	13.1
1965	**May**	5.516E+03	5.421E+02	10.2	20.8
1965	**Jun**	1.394E+04	6.056E+02	23.0	7.0
1965	**Jul**	1.426E+04	6.039E+02	23.6	7.4
1965	**Aug**	1.318E+04	5.806E+02	22.7	8.3
1965	**Sep**	1.489E+04	6.300E+02	23.6	6.4
1965	**Oct**	1.386E+04	6.412E+02	21.6	9.4
1965	**Nov**	1.495E+04	6.320E+02	23.7	6.4
1965	**Dec**	1.468E+04	6.706E+02	21.9	9.1
1966	**Jan**	1.659E+04	7.032E+02	23.6	7.4
1966	**Feb**	4.027E+03	7.492E+02	5.4	22.6
1966	**Mar**	5.654E+04	2.372E+03	23.8	7.2
1966	**Apr**	6.064E+04	2.445E+03	24.8	5.2
1966	**May**	6.988E+04	2.376E+03	29.4	1.6
1966	**Jun**	6.284E+04	2.388E+03	26.3	3.7
1966	**Jul**	6.445E+04	2.253E+03	28.6	2.4
1966	**Aug**	5.795E+04	2.212E+03	26.2	4.8
1966	**Sep**	4.788E+04	2.098E+03	22.8	7.2

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1966	**Oct**	7.124E+04	2.386E+03	29.9	1.1
1966	**Nov**	4.134E+04	1.995E+03	20.7	9.3
1966	**Dec**	6.152E+04	2.464E+03	25.0	6.0
1967	**Jan**	7.398E+04	2.558E+03	28.9	2.1
1967	**Feb**	6.885E+04	2.732E+03	25.2	2.8
1967	**Mar**	4.797E+04	2.291E+03	20.9	10.1
1967	**Apr**	6.932E+04	2.465E+03	28.1	1.9
1967	**May**	7.435E+04	2.426E+03	30.7	0.4
1967	**Jun**	7.237E+04	2.412E+03	30.0	0.0
1967	**Jul**	7.450E+04	2.403E+03	31.0	0.0
1967	**Aug**	6.586E+04	2.322E+03	28.4	2.6
1967	**Sep**	6.679E+04	2.386E+03	28.0	2.0
1967	**Oct**	6.053E+04	2.353E+03	25.7	5.3
1967	**Nov**	7.730E+04	2.577E+03	30.0	0.0
1967	**Dec**	8.253E+04	2.662E+03	31.0	0.0
1968	**Jan**	6.652E+04	2.537E+03	26.2	4.8
1968	**Feb**	7.821E+04	2.697E+03	29.0	0.0
1968	**Mar**	5.470E+04	2.495E+03	21.9	9.1
1968	**Apr**	6.379E+04	2.503E+03	25.5	4.5
1968	**May**	7.987E+04	2.576E+03	31.0	0.0
1968	**Jun**	2.373E+04	2.370E+03	10.0	20.0
1968	**Jul**	6.367E+04	2.270E+03	28.1	3.0
1968	**Aug**	7.311E+04	2.358E+03	31.0	0.0
1968	**Sep**	3.110E+03	2.340E+03	1.3	28.7
1968	**Oct**	2.830E+02	3.430E+02	0.8	30.2
1968	**Nov**	6.652E+04	2.356E+03	28.2	1.8
1968	**Dec**	7.525E+04	2.643E+03	28.5	2.5
1969	**Jan**	6.433E+04	2.603E+03	24.7	6.3
1969	**Feb**	5.170E+04	2.629E+03	19.7	8.3
1969	**Mar**	2.447E+04	2.701E+03	9.1	21.9
1969	**Apr**	4.973E+04	2.054E+03	24.2	5.8
1969	**May**	4.788E+04	1.544E+03	31.0	0.0
1969	**Jun**	5.139E+04	1.783E+03	28.8	1.2
1969	**Jul**	5.270E+04	2.407E+03	21.9	9.1
1969	**Aug**	7.504E+04	2.500E+03	30.0	1.0
1969	**Sep**	5.215E+04	2.419E+03	21.6	8.5
1969	**Oct**	7.919E+04	2.551E+03	31.0	0.0
1969	**Nov**	6.068E+04	2.697E+03	22.5	7.5
1969	**Dec**	1.778E+04	1.572E+03	11.3	19.7
1970	**Jan**	7.106E+04	2.292E+03	31.0	0.0
1970	**Feb**	5.480E+04	2.172E+03	25.2	2.8
1970	**Mar**	4.544E+04	2.081E+03	21.8	9.2
1970	**Apr**	6.449E+04	2.239E+03	28.8	1.2
1970	**May**	4.683E+04	1.953E+03	24.0	7.0
1970	**Jun**	5.646E+04	2.026E+03	27.9	2.1

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1970	**Jul**	5.104E+04	1.905E+03	26.8	4.2
1970	**Aug**	4.986E+04	1.975E+03	25.2	5.8
1970	**Sep**	4.719E+04	1.878E+03	25.1	4.9
1970	**Oct**	4.758E+04	1.838E+03	25.9	5.1
1970	**Nov**	2.168E+04	1.844E+03	11.8	18.3
1970	**Dec**	5.122E+04	2.106E+03	24.3	6.7
1971	**Jan**	5.488E+04	2.333E+03	23.5	7.5
1971	**Feb**	7.063E+04	2.523E+03	28.0	0.0
1971	**Mar**	6.260E+04	2.407E+03	26.0	5.0
1971	**Apr**	6.430E+04	2.243E+03	28.7	1.3
1971	**May**	4.749E+04	2.153E+03	22.1	8.9
1971	**Jun**	6.964E+04	2.321E+03	30.0	0.0
1971	**Jul**	4.731E+04	2.088E+03	22.7	8.3
1971	**Aug**	6.062E+04	2.103E+03	28.8	2.2
1971	**Sep**	5.689E+04	2.077E+03	27.4	2.6
1971	**Oct**	7.063E+04	2.294E+03	30.8	0.2
1971	**Nov**	2.583E+04	1.869E+03	13.8	16.2
1971	**Dec**	7.485E+04	2.415E+03	31.0	0.0
1972	**Jan**	5.964E+04	2.303E+03	25.9	5.1
1972	**Feb**	7.455E+04	2.571E+03	29.0	0.0
1972	**Mar**	5.665E+04	2.124E+03	26.7	4.3
1972	**Apr**	4.639E+04	2.141E+03	21.7	8.3
1972	**May**	6.734E+04	2.228E+03	30.2	0.8
1972	**Jun**	5.371E+04	2.189E+03	24.5	5.5
1972	**Jul**	6.975E+04	2.250E+03	31.0	0.0
1972	**Aug**	5.742E+04	2.155E+03	26.7	4.4
1972	**Sep**	5.715E+04	2.115E+03	27.0	3.0
1972	**Oct**	4.097E+04	2.179E+03	18.8	12.2
1972	**Nov**	6.788E+04	2.326E+03	29.2	0.8
1972	**Dec**	6.654E+04	2.436E+03	27.3	3.7
1973	**Jan**	7.738E+04	2.496E+03	31.0	0.0
1973	**Feb**	5.618E+04	2.298E+03	24.5	3.6
1973	**Mar**	7.262E+04	2.352E+03	30.9	0.1
1973	**Apr**	4.274E+04	1.982E+03	21.6	8.4
1973	**May**	6.707E+04	2.232E+03	30.1	1.0
1973	**Jun**	5.122E+04	2.059E+03	24.9	5.1
1973	**Jul**	6.041E+04	2.054E+03	29.4	1.6
1973	**Aug**	4.999E+04	1.938E+03	25.8	5.2
1973	**Sep**	6.377E+04	2.126E+03	30.0	0.0
1973	**Oct**	3.093E+04	2.071E+03	14.9	16.1
1973	**Nov**	6.529E+04	2.176E+03	30.0	0.0
1973	**Dec**	5.984E+04	2.257E+03	26.5	4.5
1974	**Jan**	5.896E+04	2.242E+03	26.3	4.7
1974	**Feb**	5.469E+04	2.371E+03	23.1	4.9
1974	**Mar**	7.205E+04	2.324E+03	31.0	0.0

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1974	**Apr**	6.100E+04	2.334E+03	26.1	3.9
1974	**May**	6.663E+04	2.149E+03	31.0	0.0
1974	**Jun**	3.965E+04	2.142E+03	18.5	11.5
1974	**Jul**	5.197E+03	1.328E+03	3.9	27.1
1974	**Aug**	5.168E+04	1.667E+03	31.0	0.0
1974	**Sep**	5.062E+04	1.731E+03	29.3	0.8
1974	**Oct**	1.561E+04	1.419E+03	11.0	20.0
1974	**Nov**	4.579E+04	1.654E+03	27.7	2.3
1974	**Dec**	5.850E+04	1.959E+03	29.9	1.1
1975	**Jan**	1.192E+04	1.317E+03	9.1	22.0
1975	**Feb**	5.500E+04	1.964E+03	28.0	0.0
1975	**Mar**	5.360E+04	2.129E+03	25.2	5.8
1975	**Apr**	5.152E+04	2.148E+03	24.0	6.0
1975	**May**	6.529E+04	2.217E+03	29.5	1.6
1975	**Jun**	1.088E+04	2.278E+03	4.8	25.2
1975	**Aug**	5.103E+04	1.763E+03	28.9	33.1
1975	**Sep**	5.655E+04	2.008E+03	28.2	1.8
1975	**Oct**	3.905E+04	1.878E+03	20.8	10.2
1975	**Nov**	6.183E+04	2.061E+03	30.0	0.0
1975	**Dec**	5.208E+04	2.037E+03	25.6	5.4
1976	**Jan**	6.571E+04	2.120E+03	31.0	0.0
1976	**Feb**	5.408E+04	2.047E+03	26.4	2.6
1976	**Mar**	4.647E+04	1.863E+03	25.0	6.1
1976	**Apr**	5.474E+04	2.224E+03	24.6	5.4
1976	**May**	3.012E+04	1.724E+03	17.5	13.5
1976	**Jun**	4.865E+04	1.971E+03	24.7	5.3
1976	**Jul**	4.843E+04	1.996E+03	24.3	6.7
1976	**Aug**	4.430E+04	1.823E+03	24.3	6.7
1976	**Sep**	6.187E+04	2.062E+03	30.0	0.0
1976	**Oct**	4.156E+04	1.745E+03	23.8	7.2
1976	**Nov**	3.092E+04	1.851E+03	16.7	13.3
1976	**Dec**	4.151E+04	1.946E+03	21.3	9.7
1977	**Jan**	6.203E+04	2.120E+03	29.3	1.7
1977	**Feb**	5.591E+04	2.195E+03	25.5	2.5
1977	**Apr**	2.275E+04	1.576E+03	14.4	46.6
1977	**May**	6.220E+04	2.006E+03	31.0	0.0
1977	**Jun**	3.763E+04	1.893E+03	19.9	10.1
1977	**Jul**	5.817E+04	1.877E+03	31.0	0.0
1977	**Aug**	3.968E+04	1.706E+03	23.3	7.7
1977	**Sep**	3.806E+04	1.801E+03	21.1	8.9
1977	**Oct**	5.643E+04	1.957E+03	28.8	2.2
1977	**Nov**	6.078E+04	2.279E+03	26.7	3.3
1977	**Dec**	5.239E+04	1.917E+03	27.3	3.7
1978	**Jan**	4.757E+04	1.993E+03	23.9	7.1
1978	**Jun**	4.082E+03	8.858E+02	4.6	145.4

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1978	**Jul**	5.526E+04	1.852E+03	29.8	1.2
1978	**Aug**	4.475E+04	2.014E+03	22.2	8.8
1978	**Sep**	4.099E+04	1.909E+03	21.5	8.5
1978	**Oct**	6.053E+04	2.038E+03	29.7	1.3
1978	**Nov**	5.581E+04	2.236E+03	25.0	5.0
1978	**Dec**	4.999E+04	2.020E+03	24.8	6.3
1979	**Jan**	7.252E+04	2.416E+03	30.0	1.0
1979	**Feb**	2.642E+04	1.960E+03	13.5	14.5
1979	**Mar**	6.158E+04	2.113E+03	29.2	1.9
1979	**Apr**	5.290E+03	1.867E+03	2.8	27.2
1979	**Aug**	1.022E+04	1.366E+03	7.5	115.5
1979	**Sep**	5.468E+04	1.864E+03	29.3	0.7
1979	**Oct**	5.414E+04	1.959E+03	27.6	3.4
1979	**Nov**	3.285E+04	1.903E+03	17.3	12.7
1979	**Dec**	5.271E+04	2.164E+03	24.4	6.6
1980	**Jan**	5.914E+04	2.309E+03	25.6	5.4
1980	**Feb**	3.551E+04	1.825E+03	19.5	9.6
1980	**Mar**	7.296E+04	2.353E+03	31.0	0.0
1980	**Apr**	4.020E+04	2.001E+03	20.1	9.9
1980	**May**	5.746E+04	1.958E+03	29.3	1.7
1980	**Jun**	4.266E+04	1.888E+03	22.6	7.4
1980	**Jul**	5.078E+04	1.686E+03	30.1	0.9
1980	**Aug**	2.004E+04	1.700E+03	11.8	19.2
1980	**Nov**	3.344E+03	1.140E+03	2.9	88.1
1980	**Dec**	6.358E+04	2.221E+03	28.6	2.4
1981	**Jan**	5.773E+04	2.390E+03	24.2	6.9
1981	**Feb**	5.409E+04	2.260E+03	23.9	4.1
1981	**Mar**	7.687E+04	2.480E+03	31.0	0.0
1981	**Apr**	4.655E+04	2.071E+03	22.5	7.5
1981	**May**	3.127E+04	2.290E+03	13.7	17.4
1981	**Jun**	2.541E+03	1.066E+03	2.4	27.6
1981	**Jul**	5.293E+04	1.846E+03	28.7	2.3
1981	**Aug**	2.145E+04	1.514E+03	14.2	16.8
1981	**Sep**	4.912E+04	1.981E+03	24.8	5.2
1981	**Oct**	5.539E+04	1.971E+03	28.1	2.9
1981	**Nov**	3.977E+04	2.028E+03	19.6	10.4
1981	**Dec**	4.876E+04	2.152E+03	22.7	8.4
1982	**Jan**	5.295E+04	2.377E+03	22.3	8.7
1982	**Feb**	5.000E+04	2.180E+03	22.9	5.1
1982	**Mar**	4.348E+04	2.061E+03	21.1	9.9
1982	**Apr**	5.164E+04	2.246E+03	23.0	7.0
1982	**May**	5.132E+04	2.092E+03	24.5	6.5
1982	**Jun**	6.426E+04	2.142E+03	30.0	0.0
1982	**Jul**	5.279E+04	2.003E+03	26.4	4.6
1982	**Aug**	6.116E+04	2.137E+03	28.6	2.4

Year	Month	Recorded Energy (MWd)	Average Power (MW)	Calculated Time at Power (d)	Calculated Decay Time (d)
1982	**Sep**	5.346E+04	2.049E+03	26.1	3.9
1982	**Oct**	4.777E+04	2.026E+03	23.6	7.4
1982	**Dec**	6.105E+04	2.388E+03	25.6	35.4
1983	**Jan**	7.468E+04	2.552E+03	29.3	1.7
1983	**Feb**	7.393E+04	2.656E+03	27.8	0.2
1983	**Mar**	6.086E+04	2.375E+03	25.6	5.4
1983	**Apr**	7.616E+04	2.542E+03	30.0	0.0
1983	**May**	7.360E+04	2.374E+03	31.0	0.0
1983	**Jun**	4.282E+04	2.341E+03	18.3	11.7
1983	**Jul**	5.256E+04	2.080E+03	25.3	5.7
1983	**Aug**	5.954E+04	2.268E+03	26.3	4.8
1983	**Sep**	7.089E+04	2.363E+03	30.0	0.0
1983	**Oct**	5.231E+04	2.360E+03	22.2	8.8
1983	**Nov**	7.773E+04	2.591E+03	30.0	0.0
1983	**Dec**	8.280E+04	2.671E+03	31.0	0.0
1984	**Jan**	8.371E+04	2.700E+03	31.0	0.0
1984	**Feb**	5.974E+03	2.607E+03	2.3	26.7
1984	**Mar**	8.015E+03	1.693E+03	4.7	26.3
1984	**Apr**	7.820E+04	2.610E+03	30.0	0.0
1984	**May**	7.816E+04	2.521E+03	31.0	0.0
1984	**Jun**	7.292E+04	2.431E+03	30.0	0.0
1984	**Jul**	7.359E+04	2.374E+03	31.0	0.0
1984	**Aug**	6.831E+04	2.300E+03	29.7	1.3
1984	**Sep**	6.981E+04	2.327E+03	30.0	0.0
1984	**Oct**	1.124E+04	1.624E+03	6.9	24.1
1984	**Nov**	6.042E+04	2.363E+03	25.6	4.4
1984	**Dec**	7.733E+04	2.548E+03	30.4	0.7
1985	**Jan**	8.424E+04	2.717E+03	31.0	0.0
1985	**Feb**	6.797E+04	2.601E+03	26.1	1.9
1985	**Mar**	6.323E+04	2.547E+03	24.8	6.2
1985	**Apr**	7.648E+04	2.553E+03	30.0	0.0
1985	**May**	6.950E+04	2.405E+03	28.9	2.1
1985	**Jun**	4.661E+04	2.327E+03	20.0	10.0
Final Decay Through December 31, 2009					8991.0

Table 7 Composition of Reactor Tank and Internal Aluminum Components. (weight fraction)

	Reactor Tank (304SS)	Internals (Al6063)	Surface Deposits
Mass (g)	See Table 8		
ρ (g/cm^3)	8.000421532	2.71	3.7381966
Vol. (cm^3)	See Table 8		
C	5.910E-04	1.000E-03	—
Mn	1.271E-02	1.000E-03	—
Si	4.689E-03	2.000E-03	8.307E-02
P	2.600E-04	—*	—
S	1.850E-04	—	1.004E-02
Ni	9.234E-02	—	1.920E-03
Cr	1.864E-01	—	7.530E-03
Mo	3.453E-03	—	—
B^{10}	3.502E-06	—	—
B^{11}	1.550E-05	—	—
Co	1.286E-03	—	—
Cu	2.891E-03	1.000E-03	5.200E-04
N^{14}	4.144E-04	—	—
N^{15}	1.631E-06	—	—
Fe	6.906E-01	3.500E-03	3.227E-02
Mg	—	4.500E-03	—
Ti	1.050E-04	1.000E-03	1.900E-04
Zn	—	1.000E-03	4.700E-04
Al	3.500E-05	9.850E-01	3.700E-01
Sn	4.400E-04	—	—
Nb	3.200E-04	—	—
V	5.100E-04	—	—
Cl	—	—	8.620E-03
H	4.000E-06	—	1.382E-02
O	5.210E-04	—	4.388E-01
In	2.950E-04	—	—
Cd	6.300E-05	—	2.893E-02
Sb	4.000E-04	—	—
Bi	4.000E-04	—	—
Pb	5.000E-04	—	—
Zr	2.500E-04	—	—
As	2.750E-04	—	—
Ag	8.000E-06	—	—
K	—	—	9.000E-04
Ca	—	—	2.960E-03
U	5.000E-06	—	—

* — is entered for Zero values

Table 8 Volume/Mass Data for Reactor Tank and Internal Components

		Notes	Vol. (cm^3)	Mass (g)
Reactor Tank (304SS)				
	L&K Reactors		1.586E+06	1.269E+07
	C Reactor		2.780E+06	2.224E+07
Internals (Al6063)				
	L Reactor	516 ushes	1.125E+06	3.049E+06
	K Reactor	432 ushes	9.662E+05	2.618E+06
	C Reactor	500 ushes	1.114E+06	3.018E+06
Tank Surface Deposits				
	L&K Reactors		4.973E+03	1.859E+04
	C Reactor		7.191E+03	2.688E+04
Surface Deposits on Internals				
	L Reactor	516 ushes	8.949E+04	3.345E+05
	K Reactor	432 ushes	7.671E+04	2.868E+05
	C Reactor	500 ushes	8.848E+04	3.308E+05

Table 9 Composition of Homogenized Materials Regions 1V in L&K Reactors. (weight fraction)

	1H1V	2H1V	3H1V	4H1V	5H1V
Mass (g)	9.588E+05	2.232E+07	9.656E+07	5.103E+08	6.959E+07
ρ (g/cm^3)	9.761E-02	1.916E+00	2.105E+00	3.199E+00	1.715E+00
Vol. (cm^3)	9.823E+06	1.165E+07	4.587E+07	1.595E+08	4.059E+07
C	5.910E-04	5.935E-04	7.140E-04	8.030E-04	8.772E-04
Mn	1.271E-02	4.429E-03	3.773E-03	8.749E-03	3.289E-03
Si	4.689E-03	9.059E-02	1.014E-01	5.131E-02	1.169E-01
P	2.600E-04	3.486E-05	3.941E-05	1.719E-04	4.131E-05
S	1.850E-04	9.083E-03	7.264E-03	1.998E-03	4.539E-03
Ni	9.234E-02	4.875E-03	2.551E-03	5.394E-02	3.201E-03
Cr	1.864E-01	8.652E-03	3.580E-03	1.073E-01	4.432E-03
Mo	3.453E-03	4.257E-04	3.937E-04	2.202E-03	4.821E-04
B^{10}	3.502E-06	3.475E-06	2.705E-06	2.691E-06	1.715E-06
B^{11}	1.550E-05	1.538E-05	1.197E-05	1.191E-05	7.590E-06
Co	1.286E-03	1.634E-04	1.050E-04	7.583E-04	7.636E-05
Cu	2.891E-03	9.368E-04	8.129E-04	2.280E-03	7.385E-04
N^{14}	4.144E-04	1.678E-05	5.196E-06	2.369E-04	6.767E-06
N^{15}	1.631E-06	6.604E-08	2.045E-08	9.323E-07	2.663E-08
Fe	6.906E-01	1.011E-01	1.042E-01	4.496E-01	9.928E-02
Mg	—	1.581E-02	2.361E-02	1.454E-02	3.499E-02
Ti	1.050E-04	2.033E-03	1.669E-03	5.466E-04	1.124E-03
Zn	—	6.782E-05	5.414E-05	1.401E-05	3.373E-05
Al	3.500E-05	2.192E-02	3.583E-02	2.336E-02	5.617E-02
Sn	4.400E-04	4.903E-05	4.144E-05	2.732E-04	4.823E-05
Nb	3.200E-04	5.556E-05	5.514E-05	2.154E-04	6.612E-05
V	5.100E-04	3.552E-04	3.468E-04	4.619E-04	3.449E-04
Cl	—	4.069E-05	3.248E-05	8.408E-06	2.024E-05
H	4.000E-06	1.620E-07	5.016E-08	2.287E-06	6.532E-08
O	5.210E-04	3.159E-01	3.279E-01	1.433E-01	3.441E-01
In	2.950E-04	1.195E-05	3.699E-06	1.687E-04	4.817E-06
Cd	6.300E-05	7.072E-06	4.399E-06	3.696E-05	3.277E-06
Sb	4.000E-04	1.783E-05	6.315E-06	2.290E-04	7.342E-06
Bi	4.000E-04	1.620E-05	5.016E-06	2.287E-04	6.532E-06
Pb	5.000E-04	2.487E-04	1.886E-04	3.331E-04	1.218E-04
Zr	2.500E-04	5.329E-04	4.205E-04	2.510E-04	2.641E-04
As	2.750E-04	5.192E-05	3.600E-05	1.657E-04	2.477E-05
Ag	8.000E-06	1.499E-06	1.039E-06	4.817E-06	7.153E-07
K	—	1.760E-02	1.405E-02	3.636E-03	8.752E-03
Ca	—	4.012E-01	3.684E-01	1.323E-01	3.185E-01
W	—	1.266E-06	1.011E-06	2.616E-07	6.296E-07
Ba	—	4.356E-04	3.477E-04	9.000E-05	2.166E-04
Be	—	9.675E-06	7.723E-06	1.999E-06	4.812E-06
Br	—	2.170E-06	1.732E-06	4.484E-07	1.079E-06
Ce	—	2.197E-05	1.754E-05	4.540E-06	1.093E-05
Cs	—	1.175E-06	9.384E-07	2.429E-07	5.846E-07

	1H1V	2H1V	3H1V	4H1V	5H1V
Dy	—	2.080E-06	1.660E-06	4.297E-07	1.034E-06
Eu	—	4.973E-07	3.970E-07	1.028E-07	2.473E-07
Ga	—	7.957E-06	6.352E-06	1.644E-06	3.958E-06
Hf	—	1.989E-06	1.588E-06	4.111E-07	9.894E-07
Ho	—	8.138E-07	6.496E-07	1.682E-07	4.047E-07
La	—	1.175E-05	9.384E-06	2.429E-06	5.846E-06
Li	—	1.808E-05	1.444E-05	3.737E-06	8.994E-06
Lu	—	2.441E-07	1.949E-07	5.045E-08	1.214E-07
Na	—	2.056E-03	1.641E-03	4.249E-04	1.023E-03
Pd	—	2.713E-06	2.165E-06	5.605E-07	1.349E-06
Rb	—	3.165E-05	2.526E-05	6.539E-06	1.574E-05
Sc	—	5.877E-06	4.692E-06	1.214E-06	2.923E-06
Se	—	3.129E-05	2.497E-05	6.465E-06	1.556E-05
Sm	—	1.808E-06	1.444E-06	3.737E-07	8.994E-07
Sr	—	3.960E-04	3.162E-04	8.184E-05	1.970E-04
Ta	—	3.978E-07	3.176E-07	8.221E-08	1.979E-07
Tb	—	3.707E-07	2.959E-07	7.660E-08	1.844E-07
Th	—	3.165E-06	2.526E-06	6.539E-07	1.574E-06
Tl	—	2.478E-05	1.978E-05	5.119E-06	1.232E-05
U	5.000E-06	2.644E-06	2.012E-06	3.363E-06	1.296E-06
Y	—	1.646E-05	1.314E-05	3.401E-06	8.185E-06
Yb	—	1.266E-06	1.011E-06	2.616E-07	6.296E-07

Table 10 Composition of Homogenized Materials Regions 2V in L&K Reactors. (weight fraction)

	1H2V	2H2V	3H2V	4H2V	5H2V
Mass (g)	1.901E+06	3.093E+06	5.453E+07	1.345E+08	1.385E+07
ρ (g/cm^3)	7.512E-01	1.030E+00	4.614E+00	3.272E+00	1.325E+00
Vol. (cm^3)	2.531E+06	3.002E+06	1.182E+07	4.111E+07	1.046E+07
C	5.910E-04	4.741E-04	3.267E-03	8.064E-03	6.060E-04
Mn	1.271E-02	1.081E-02	1.232E-02	1.432E-02	1.216E-02
Si	4.689E-03	2.345E-02	8.669E-03	1.072E-01	1.124E-02
P	2.600E-04	2.086E-04	8.537E-04	7.266E-05	2.472E-04
S	1.850E-04	2.129E-03	5.894E-04	5.170E-05	4.389E-04
Ni	9.234E-02	7.409E-02	8.058E-02	2.581E-02	8.716E-02
Cr	1.864E-01	1.496E-01	1.619E-01	5.568E-02	1.758E-01
Mo	3.453E-03	2.772E-03	3.147E-03	4.556E-03	3.279E-03
B^{10}	3.502E-06	3.538E-06	3.127E-06	9.787E-07	3.398E-06
B^{11}	1.550E-05	1.566E-05	1.384E-05	4.331E-06	1.504E-05
Co	1.286E-03	1.056E-03	1.117E-03	3.594E-04	1.216E-03
Cu	2.891E-03	2.438E-03	2.675E-03	4.398E-03	2.765E-03
N^{14}	4.144E-04	3.324E-04	3.588E-04	1.158E-04	3.907E-04
N^{15}	1.631E-06	1.308E-06	1.412E-06	4.557E-07	1.537E-06
Fe	6.906E-01	5.590E-01	6.987E-01	7.758E-01	6.561E-01
Mg	—	3.459E-03	4.485E-04	—	2.041E-03
Ti	1.050E-04	5.037E-04	2.079E-04	2.934E-05	1.641E-04
Zn	—	1.483E-05	1.923E-06	—	1.968E-06
Al	3.500E-05	4.814E-03	6.742E-04	9.781E-06	3.309E-03
Sn	4.400E-04	3.544E-04	3.953E-04	1.230E-04	4.171E-04
Nb	3.200E-04	2.576E-04	2.991E-04	8.943E-05	3.051E-04
V	5.100E-04	4.460E-04	5.403E-04	1.425E-04	4.999E-04
Cl	—	8.901E-06	1.154E-06	—	1.181E-06
H	4.000E-06	3.209E-06	3.464E-06	1.118E-06	3.771E-06
O	5.210E-04	6.952E-02	9.411E-03	1.456E-04	2.056E-02
In	2.950E-04	2.367E-04	2.554E-04	8.244E-05	2.781E-04
Cd	6.300E-05	5.153E-05	5.468E-05	1.761E-05	5.953E-05
Sb	4.000E-04	3.212E-04	3.464E-04	1.118E-04	3.772E-04
Bi	4.000E-04	3.209E-04	3.464E-04	1.118E-04	3.771E-04
Pb	5.000E-04	4.511E-04	4.394E-04	2.566E-03	4.780E-04
Zr	2.500E-04	3.149E-04	2.313E-04	6.987E-05	2.509E-04
As	2.750E-04	2.295E-04	2.393E-04	7.685E-05	2.605E-04
Ag	8.000E-06	6.675E-06	6.961E-06	2.236E-06	7.576E-06
K	—	3.849E-03	4.990E-04	—	5.105E-04
Ca	—	8.776E-02	1.138E-02	—	1.858E-02
W	—	2.769E-07	3.590E-08	—	3.673E-08
Ba	—	9.528E-05	1.235E-05	—	1.264E-05
Be	—	2.116E-06	2.744E-07	—	2.807E-07
Br	—	4.747E-07	6.154E-08	—	6.296E-08
Ce	—	4.806E-06	6.231E-07	—	6.375E-07
Cs	—	2.571E-07	3.334E-08	—	3.410E-08

	1H2V	2H2V	3H2V	4H2V	5H2V
Dy	—	4.549E-07	5.898E-08	—	6.034E-08
Eu	—	1.088E-07	1.410E-08	—	1.443E-08
Ga	—	1.741E-06	2.257E-07	—	2.309E-07
Hf	—	4.351E-07	5.642E-08	—	5.771E-08
Ho	—	1.780E-07	2.308E-08	—	2.361E-08
La	—	2.571E-06	3.334E-07	—	3.410E-07
Li	—	3.956E-06	5.129E-07	—	5.247E-07
Lu	—	5.340E-08	6.924E-09	—	7.083E-09
Na	—	4.498E-04	5.831E-05	—	5.965E-05
Pd	—	5.934E-07	7.693E-08	—	7.870E-08
Rb	—	6.923E-06	8.975E-07	—	9.182E-07
Sc	—	1.286E-06	1.667E-07	—	1.705E-07
Se	—	6.844E-06	8.873E-07	—	9.077E-07
Sm	—	3.956E-07	5.129E-08	—	5.247E-08
Sr	—	8.663E-05	1.123E-05	—	1.149E-05
Ta	—	8.703E-08	1.128E-08	—	1.154E-08
Tb	—	8.109E-08	1.051E-08	—	1.076E-08
Th	—	6.923E-07	8.975E-08	—	9.182E-08
Tl	—	5.419E-06	7.026E-07	—	7.188E-07
U	5.000E-06	4.545E-06	4.399E-06	1.397E-06	4.785E-06
Y	—	3.600E-06	4.667E-07	—	4.774E-07
Yb	—	2.769E-07	3.590E-08	—	3.673E-08

Table 11 Composition of Homogenized Materials Regions 3V in L&K Reactors. (weight fraction)

	1H3V	2H3V	3H3V	5H3V
Mass (g)	1.971E+07	2.106E+07	4.724E+07	8.046E+07
ρ (g/cm^3)	3.680E+00	3.315E+00	2.322E+00	3.635E+00
Vol. (cm^3)	5.357E+06	6.353E+06	2.034E+07	2.213E+07
C	5.915E-04	5.916E-04	5.921E-04	5.910E-04
Mn	1.273E-02	1.273E-02	1.274E-02	1.271E-02
Si	4.703E-03	4.704E-03	4.716E-03	4.689E-03
P	2.593E-04	2.593E-04	2.587E-04	2.600E-04
S	1.853E-04	1.853E-04	1.856E-04	1.850E-04
Ni	9.280E-02	9.285E-02	9.326E-02	9.234E-02
Cr	1.863E-01	1.863E-01	1.862E-01	1.864E-01
Mo	3.483E-03	3.486E-03	3.512E-03	3.453E-03
B^{10}	3.541E-06	3.545E-06	3.578E-06	3.502E-06
B^{11}	1.567E-05	1.569E-05	1.584E-05	1.550E-05
Co	1.283E-03	1.282E-03	1.279E-03	1.286E-03
Cu	2.884E-03	2.883E-03	2.876E-03	2.891E-03
N^{14}	4.133E-04	4.132E-04	4.122E-04	4.144E-04
N^{15}	1.626E-06	1.626E-06	1.622E-06	1.631E-06
Fe	6.901E-01	6.901E-01	6.896E-01	6.906E-01
Mg	—	—	—	—
Ti	1.656E-04	1.723E-04	2.250E-04	1.050E-04
Zn	—	—	—	—
Al	4.398E-05	4.496E-05	5.278E-05	3.500E-05
Sn	4.389E-04	4.387E-04	4.377E-04	4.400E-04
Nb	3.192E-04	3.191E-04	3.184E-04	3.200E-04
V	5.216E-04	5.229E-04	5.330E-04	5.100E-04
Cl	—	—	—	—
H	3.990E-06	3.988E-06	3.979E-06	4.000E-06
O	5.197E-04	5.195E-04	5.183E-04	5.210E-04
In	2.942E-04	2.942E-04	2.935E-04	2.950E-04
Cd	6.284E-05	6.282E-05	6.268E-05	6.300E-05
Sb	3.990E-04	3.988E-04	3.979E-04	4.000E-04
Bi	3.990E-04	3.988E-04	3.979E-04	4.000E-04
Pb	4.987E-04	4.986E-04	4.974E-04	5.000E-04
Zr	2.494E-04	2.493E-04	2.487E-04	2.500E-04
As	2.743E-04	2.742E-04	2.736E-04	2.750E-04
Ag	7.979E-06	7.977E-06	7.959E-06	8.000E-06
K	—	—	—	—
Ca	—	—	—	—
W	—	—	—	—
Ba	—	—	—	—
Be	—	—	—	—
Br	—	—	—	—
Ce	—	—	—	—
Cs	—	—	—	—

	1H3V	2H3V	3H3V	5H3V
Dy	—	—	—	—
Eu	—	—	—	—
Ga	—	—	—	—
Hf	—	—	—	—
Ho	—	—	—	—
La	—	—	—	—
Li	—	—	—	—
Lu	—	—	—	—
Na	—	—	—	—
Pd	—	—	—	—
Rb	—	—	—	—
Sc	—	—	—	—
Se	—	—	—	—
Sm	—	—	—	—
Sr	—	—	—	—
Ta	—	—	—	—
Tb	—	—	—	—
Th	—	—	—	—
Tl	—	—	—	—
U	4.987E-06	4.986E-06	4.974E-06	5.000E-06
Y	—	—	—	—
Yb	—	—	—	—

Table 12 Composition of Homogenized Materials Regions 1V in C Reactor. (weight fraction)

	1H1V	2H1V	3H1V	4H1V	5H1V
Mass (g)	1.220E+06	6.268E+06	4.602E+07	2.682E+08	3.163E+07
Vol. (cm^3)	1.256E+07	9.562E+06	2.587E+07	1.493E+08	2.277E+07
ρ (g/cm^3)	9.717E-02	6.555E-01	1.779E+00	1.796E+00	1.389E+00
C	2.865E-03	5.892E-04	8.974E-04	1.371E-03	1.106E-03
Mn	1.442E-02	5.635E-03	3.202E-03	4.113E-03	4.109E-03
Si	5.324E-03	7.767E-02	1.042E-01	1.107E-01	1.079E-01
P	3.022E-04	6.815E-05	8.019E-05	6.284E-05	6.466E-05
S	2.330E-04	7.707E-03	4.086E-03	4.303E-03	4.191E-03
Ni	7.537E-02	1.786E-02	3.472E-03	3.760E-03	7.512E-03
Cr	1.462E-01	3.505E-02	4.920E-03	4.252E-03	1.262E-02
Mo	3.815E-03	8.735E-04	4.995E-04	7.064E-04	7.272E-04
B^{10}	2.682E-06	3.459E-06	1.540E-06	1.604E-06	1.728E-06
B^{11}	1.187E-05	1.531E-05	6.814E-06	7.099E-06	7.647E-06
Co	9.847E-04	3.295E-04	7.350E-05	6.710E-05	1.264E-04
Cu	3.385E-03	1.222E-03	7.250E-04	9.991E-04	9.380E-04
N^{14}	3.173E-04	7.586E-05	7.827E-06	4.799E-06	2.435E-05
N^{15}	1.249E-06	2.985E-07	3.080E-08	1.888E-08	9.582E-08
Fe	7.420E-01	1.883E-01	1.949E-01	1.432E-01	1.547E-01
Mg	—	1.337E-02	3.110E-02	3.300E-02	3.213E-02
Ti	5.489E-04	1.734E-03	1.022E-03	1.166E-03	1.090E-03
Zn	—	5.734E-05	2.998E-05	7.556E-05	3.097E-05
Al	2.025E-04	1.927E-02	5.020E-02	5.307E-02	5.189E-02
Sn	4.423E-04	1.069E-04	4.983E-05	6.765E-05	7.555E-05
Nb	4.090E-04	9.456E-05	6.799E-05	9.821E-05	9.338E-05
V	1.093E-03	3.760E-04	3.423E-04	4.822E-04	4.190E-04
Cl	—	3.440E-05	1.799E-05	1.909E-05	1.858E-05
H	3.063E-06	7.323E-07	7.556E-08	4.632E-08	2.351E-07
O	3.990E-04	2.684E-01	3.063E-01	3.246E-01	3.165E-01
In	2.259E-04	5.401E-05	5.572E-06	3.416E-06	1.734E-05
Cd	4.824E-05	1.536E-05	3.189E-06	2.850E-06	5.767E-06
Sb	3.063E-04	7.461E-05	8.275E-06	5.396E-06	2.425E-05
Bi	3.063E-04	7.323E-05	7.556E-06	4.632E-06	2.351E-05
Pb	3.829E-04	2.847E-04	1.104E-04	3.270E-03	1.337E-04
Zr	1.914E-04	4.878E-04	2.358E-04	2.481E-04	2.535E-04
As	2.106E-04	8.482E-05	2.322E-05	2.231E-05	3.478E-05
Ag	6.126E-06	2.458E-06	6.707E-07	6.440E-07	1.007E-06
K	—	1.488E-02	7.779E-03	8.254E-03	8.036E-03
Ca	—	3.396E-01	2.832E-01	3.004E-01	2.926E-01
W	—	1.070E-06	5.596E-07	5.938E-07	5.781E-07
Ba	—	3.683E-04	1.925E-04	2.043E-04	1.989E-04
Be	—	8.180E-06	4.277E-06	4.538E-06	4.418E-06
Br	—	1.835E-06	9.593E-07	1.018E-06	9.910E-07
Ce	—	1.858E-05	9.713E-06	1.031E-05	1.003E-05

	1H1V	2H1V	3H1V	4H1V	5H1V
Cs	—	9.939E-07	5.196E-07	5.514E-07	5.368E-07
Dy	—	1.758E-06	9.193E-07	9.755E-07	9.498E-07
Eu	—	4.205E-07	2.198E-07	2.333E-07	2.271E-07
Ga	—	6.728E-06	3.517E-06	3.732E-06	3.634E-06
Hf	—	1.682E-06	8.794E-07	9.331E-07	9.085E-07
Ho	—	6.881E-07	3.597E-07	3.817E-07	3.716E-07
La	—	9.939E-06	5.196E-06	5.514E-06	5.368E-06
Li	—	1.529E-05	7.994E-06	8.483E-06	8.259E-06
Lu	—	2.064E-07	1.079E-07	1.145E-07	1.115E-07
Na	—	1.738E-03	9.089E-04	9.645E-04	9.390E-04
Pd	—	2.294E-06	1.199E-06	1.272E-06	1.239E-06
Rb	—	2.676E-05	1.399E-05	1.484E-05	1.445E-05
Sc	—	4.969E-06	2.598E-06	2.757E-06	2.684E-06
Se	—	2.645E-05	1.383E-05	1.467E-05	1.429E-05
Sm	—	1.529E-06	7.994E-07	8.483E-07	8.259E-07
Sr	—	3.349E-04	1.751E-04	1.858E-04	1.809E-04
Ta	—	3.364E-07	1.759E-07	1.866E-07	1.817E-07
Tb	—	3.134E-07	1.639E-07	1.739E-07	1.693E-07
Th	—	2.676E-06	1.399E-06	1.484E-06	1.445E-06
Tl	—	2.095E-05	1.095E-05	1.162E-05	1.131E-05
U	3.829E-06	2.980E-06	1.174E-06	1.203E-06	1.409E-06
Y	—	1.391E-05	7.275E-06	7.719E-06	7.515E-06
Yb	—	1.070E-06	5.596E-07	5.938E-07	5.781E-07

Table 13 Composition of Homogenized Materials Regions 2V in C Reactor. (weight fraction)

	1H2V	2H2V	3H2V	4H2V	5H2V
Mass (g)	1.379E+06	7.534E+06	2.086E+07	1.865E+08	7.098E+06
Vol. (cm^3)	4.287E+06	3.263E+06	8.829E+06	5.096E+07	7.773E+06
ρ (g/cm^3)	3.216E-01	2.309E+00	2.363E+00	3.661E+00	9.131E-01
C	5.910E-04	1.319E-03	5.203E-06	5.899E-04	8.285E-06
Mn	1.271E-02	5.403E-03	1.119E-04	1.268E-02	1.781E-04
Si	4.689E-03	8.633E-02	4.128E-05	4.680E-03	6.574E-05
P	2.600E-04	6.000E-05	3.988E-04	2.595E-04	3.980E-04
S	1.850E-04	8.635E-03	4.972E-04	1.847E-04	4.956E-04
Ni	9.234E-02	4.003E-03	8.129E-04	9.217E-02	1.295E-03
Cr	1.864E-01	5.059E-03	1.641E-03	1.860E-01	2.613E-03
Mo	3.453E-03	6.984E-04	3.040E-05	3.447E-03	4.841E-05
B^{10}	3.502E-06	3.214E-06	3.083E-08	3.495E-06	4.909E-08
B^{11}	1.550E-05	1.422E-05	1.364E-07	1.547E-05	2.173E-07
Co	1.286E-03	1.256E-04	1.132E-05	1.284E-03	1.803E-05
Cu	2.891E-03	1.196E-03	2.545E-05	2.886E-03	4.053E-05
N^{14}	4.144E-04	6.462E-06	3.648E-06	4.136E-04	5.809E-06
N^{15}	1.631E-06	2.543E-08	1.435E-08	1.628E-06	2.286E-08
Fe	6.906E-01	1.481E-01	9.964E-01	6.894E-01	9.948E-01
Mg	—	1.499E-02	—	—	—
Ti	1.050E-04	2.074E-03	9.243E-07	1.048E-04	1.472E-06
Zn	—	6.429E-05	—	—	—
Al	3.500E-05	2.085E-02	3.081E-07	3.493E-05	4.907E-07
Sn	4.400E-04	7.008E-05	3.873E-06	4.392E-04	6.168E-06
Nb	3.200E-04	9.768E-05	2.817E-06	3.194E-04	4.486E-06
V	5.100E-04	5.493E-04	4.490E-06	5.091E-04	7.150E-06
Cl	—	3.857E-05	—	—	—
H	4.000E-06	6.238E-08	3.521E-08	3.993E-06	5.608E-08
O	5.210E-04	2.995E-01	4.586E-06	5.200E-04	7.304E-06
In	2.950E-04	4.600E-06	2.597E-06	2.945E-04	4.136E-06
Cd	6.300E-05	5.268E-06	5.546E-07	6.288E-05	8.832E-07
Sb	4.000E-04	7.781E-06	3.521E-06	3.993E-04	5.608E-06
Bi	4.000E-04	6.238E-06	3.521E-06	3.993E-04	5.608E-06
Pb	5.000E-04	2.243E-04	4.401E-06	2.358E-03	7.010E-06
Zr	2.500E-04	4.995E-04	2.201E-06	2.495E-04	3.505E-06
As	2.750E-04	4.295E-05	2.421E-06	2.745E-04	3.855E-06
Ag	8.000E-06	1.239E-06	7.042E-08	7.985E-06	1.122E-07
K	—	1.668E-02	—	—	—
Ca	—	3.803E-01	—	—	—
W	—	1.200E-06	—	—	—
Ba	—	4.129E-04	—	—	—
Be	—	9.171E-06	—	—	—
Br	—	2.057E-06	—	—	—
Ce	—	2.083E-05	—	—	—

	1H2V	2H2V	3H2V	4H2V	5H2V
Cs	—	1.114E-06	—	—	—
Dy	—	1.971E-06	—	—	—
Eu	—	4.714E-07	—	—	—
Ga	—	7.543E-06	—	—	—
Hf	—	1.886E-06	—	—	—
Ho	—	7.714E-07	—	—	—
La	—	1.114E-05	—	—	—
Li	—	1.714E-05	—	—	—
Lu	—	2.314E-07	—	—	—
Na	—	1.949E-03	—	—	—
Pd	—	2.571E-06	—	—	—
Rb	—	3.000E-05	—	—	—
Sc	—	5.571E-06	—	—	—
Se	—	2.966E-05	—	—	—
Sm	—	1.714E-06	—	—	—
Sr	—	3.754E-04	—	—	—
Ta	—	3.771E-07	—	—	—
Tb	—	3.514E-07	—	—	—
Th	—	3.000E-06	—	—	—
Tl	—	2.349E-05	—	—	—
U	5.000E-06	2.392E-06	4.401E-08	4.991E-06	7.010E-08
Y	—	1.560E-05	—	—	—
Yb	—	1.200E-06	—	—	—

Table 14 Composition of Homogenized Materials Regions 3V in C Reactor. (weight fraction)

	1H3V	2H3V	3H3V	5H3V
Mass (g)	2.222E+07	2.113E+07	7.903E+07	8.645E+07
Vol. (cm^3)	1.094E+07	8.327E+06	2.612E+07	2.547E+07
ρ (g/cm^3)	2.031E+00	2.538E+00	3.026E+00	3.395E+00
C	5.915E-04	5.911E-04	5.911E-04	5.910E-04
Mn	1.272E-02	1.271E-02	1.271E-02	1.271E-02
Si	4.701E-03	4.692E-03	4.692E-03	4.689E-03
P	2.594E-04	2.598E-04	2.599E-04	2.600E-04
S	1.853E-04	1.851E-04	1.851E-04	1.850E-04
Ni	9.276E-02	9.246E-02	9.244E-02	9.234E-02
Cr	1.863E-01	1.864E-01	1.864E-01	1.864E-01
Mo	3.480E-03	3.460E-03	3.459E-03	3.453E-03
B^{10}	3.537E-06	3.511E-06	3.510E-06	3.502E-06
B^{11}	1.565E-05	1.554E-05	1.553E-05	1.550E-05
Co	1.283E-03	1.285E-03	1.285E-03	1.286E-03
Cu	2.884E-03	2.889E-03	2.889E-03	2.891E-03
N^{14}	4.134E-04	4.141E-04	4.142E-04	4.144E-04
N^{15}	1.627E-06	1.630E-06	1.630E-06	1.631E-06
Fe	6.902E-01	6.905E-01	6.905E-01	6.906E-01
Mg	—	—	—	—
Ti	1.599E-04	1.196E-04	1.173E-04	1.050E-04
Zn	—	—	—	—
Al	4.313E-05	3.717E-05	3.682E-05	3.500E-05
Sn	4.390E-04	4.397E-04	4.398E-04	4.400E-04
Nb	3.192E-04	3.198E-04	3.198E-04	3.200E-04
V	5.205E-04	5.128E-04	5.124E-04	5.100E-04
Cl	—	—	—	—
H	3.991E-06	3.997E-06	3.998E-06	4.000E-06
O	5.198E-04	5.207E-04	5.207E-04	5.210E-04
In	2.943E-04	2.948E-04	2.948E-04	2.950E-04
Cd	6.285E-05	6.296E-05	6.297E-05	6.300E-05
Sb	3.991E-04	3.997E-04	3.998E-04	4.000E-04
Bi	3.991E-04	3.997E-04	3.998E-04	4.000E-04
Pb	4.988E-04	4.997E-04	4.997E-04	5.000E-04
Zr	2.494E-04	2.498E-04	2.499E-04	2.500E-04
As	2.744E-04	2.748E-04	2.749E-04	2.750E-04
Ag	7.981E-06	7.995E-06	7.996E-06	8.000E-06
K	—	—	—	—
Ca	—	—	—	—
W	—	—	—	—
Ba	—	—	—	—
Be	—	—	—	—
Br	—	—	—	—
Ce	—	—	—	—

	1H3V	2H3V	3H3V	5H3V
Cs	—	—	—	—
Dy	—	—	—	—
Eu	—	—	—	—
Ga	—	—	—	—
Hf	—	—	—	—
Ho	—	—	—	—
La	—	—	—	—
Li	—	—	—	—
Lu	—	—	—	—
Na	—	—	—	—
Pd	—	—	—	—
Rb	—	—	—	—
Sc	—	—	—	—
Se	—	—	—	—
Sm	—	—	—	—
Sr	—	—	—	—
Ta	—	—	—	—
Tb	—	—	—	—
Th	—	—	—	—
Tl	—	—	—	—
U	4.988E-06	4.997E-06	4.997E-06	5.000E-06
Y	—	—	—	—
Yb	—	—	—	—

Table 15 K-Reactor Monthly Operating Regimes

Start Month	End Month	Operating Regime		Start Month	End Month	Operating Regime
Oct 1954	May 1957	Regime 1		Apr 1974	Mar 1975	Regime 8
Jun 1957	Jul 1957	Down		Apr 1975	Oct 1976	Regime 3
Aug 1957	Feb 1959	Regime 9		Nov 1976	Nov 1976	Down
Mar 1959	Sep 1959	Regime 4		Dec 1976	Aug 1977	Regime 3
Oct 1959	Dec 1959	Regime 1		Sep 1977	Oct 1977	Down
Jan 1960	Nov 1960	Regime 9		Nov 1977	Oct 1978	Regime 3
Dec 1960	Jan 1961	Regime 1		Nov 1978	Nov 1978	Down
Feb 1961	Aug 1961	Regime 9		Dec 1978	Jun 1979	Regime 3
Sep 1961	Nov 1961	Regime 1		Jul 1979	Aug 1979	Down
Dec 1961	Jun 1962	Regime 9		Sep 1979	Feb 1981	Regime 3
Jul 1962	Aug 1964	Regime 1		Mar 1981	Mar 1981	Down
Sep 1964	Feb 1965	Regime 7		Apr 1981	Jan 1982	Regime 8
Mar 1965	Sep 1965	Regime 10		Feb 1982	Feb 1982	Down
Oct 1965	Nov 1965	Regime 7		Mar 1982	Jun 1983	Regime 8
Dec 1965	May 1967	Curium-II		Jul 1983	Jul 1983	Down
Jun 1967	Apr 1968	Regime 11		Aug 1983	Jan 1986	Regime 3
May 1968	Sep 1968	Regime 1		Feb 1986	Feb 1986	Down
Oct 1968	Jul 1969	Regime 3		Mar 1986	Nov 1986	Regime 3
Aug 1969	Nov 1970	Californium		Dec 1986	Feb 1987	Down
Dec 1970	Feb 1971	Down		Mar 1987	Apr 1988	Regime 8
Mar 1971	Jul 1972	Regime 3		May 1988	May 1992	Down
Aug 1972	Nov 1972	Regime 8		Jun 1992	Jul 1992	Regime 8
Dec 1972	Mar 1974	Regime 3		Aug 1992	Present	Down

Table 16 L-Reactor Monthly Operating Regimes

Start Month	End Month	Operating Regime		Start Month	End Month	Operating Regime
Jul 1954	Sep 1957	Regime 1		Jan 1964	Jul 1964	Regime 6
Oct 1957	Nov 1957	Down		Aug 1964	Sep 1964	Regime 1
Dec 1957	Apr 1958	Regime 4		Oct 1964	Nov 1964	Down
May 1958	Jan 1959	Regime 9		Dec 1964	Mar 1965	Regime 1
Feb 1959	May 1959	Regime 1		Apr 1965	Nov 1965	Regime 7
Jun 1959	Sep 1960	Regime 9		Dec 1965	May 1966	Regime 1
Oct 1960	Nov 1960	Regime 1		Jun 1966	Jun 1967	Regime 7
Dec 1960	Jan 1962	Regime 9		Jul 1967	Feb 1968	Regime 1
Feb 1962	Aug 1962	Regime 7		Mar 1968	Sep 1985	Down
Sep 1962	Oct 1962	Regime 1		Oct 1985	Jun 1988	Regime 3
Nov 1962	May 1963	Regime 6		Jul 1988	Present	Down
Jun 1963	Dec 1963	Regime 7				

Table 17 C-Reactor Monthly Operating Regimes

Start Month	End Month	Operating Regime		Start Month	End Month	Operating Regime
Apr 1955	Dec 1956	Regime 1C		Mar 1967	Mar 1968	Regime 3C
Jan 1957	Feb 1957	Down		Apr 1968	Nov 1969	Regime 1C
Mar 1957	Feb 1959	Regime 2C		Dec 1969	Jun 1975	Regime 4C
Mar 1959	Apr 1959	Regime 1C		Jul 1975	Jul 1975	Down
May 1959	Jul 1959	Regime 2C		Aug 1975	Feb 1977	Regime 4C
Aug 1959	Apr 1960	Regime 1C		Mar 1977	Mar 1977	Down
May 1960	Aug 1960	Regime 2C		Apr 1977	Jan 1978	Regime 4C
Sep 1960	Feb 1961	Regime 1C		Feb 1978	May 1978	Down
Mar 1961	Sep 1961	Regime 2C		Jun 1978	Apr 1979	Regime 4C
Oct 1961	Sep 1962	Regime 1C		May 1979	Jul 1979	Down
Oct 1962	Jan 1963	Regime 2C		Aug 1979	Aug 1980	Regime 4C
Feb 1963	Dec 1963	Regime 1C		Sep 1980	Oct 1980	Down
Jan 1964	Jan 1964	Down		Nov 1980	Oct 1982	Regime 4C
Feb 1964	Apr 1964	Regime 1C		Nov 1982	Nov 1982	Down
May 1964	Dec 1964	Regime 3C		Dec 1982	Sep 1984	Regime 5C
Jan 1965	Jan 1965	Down		Oct 1984	Jun 1985	Regime 6C
Feb 1965	Feb 1966	Regime 7C		Jul 1985	Present	Down
Mar 1966	Feb 1967	Regime 1C				

Table 18 Summary of Simulation History for K-Reactor

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
1954	Oct	1	Exposure	6.76	0.01%	0.01%	Regime 1
	Nov	2	Decay	5.95			
		3	Exposure	24.05	0.05%	0.06%	Regime 1
	Dec	4	Decay	6.84			
		5	Exposure	24.16	0.05%	0.12%	Regime 1
1955	Jan	6	Decay	1.57			
		7	Exposure	29.43	0.07%	0.18%	Regime 1
	Feb	8	Decay	10.70			
		9	Exposure	17.30	0.04%	0.22%	Regime 1
	Mar	10	Decay	7.50			
		11	Exposure	23.50	0.07%	0.29%	Regime 1
	Apr	12	Decay	0.74			
		13	Exposure	29.26	0.09%	0.38%	Regime 1
	May	14	Decay	7.06			
		15	Exposure	23.94	0.08%	0.45%	Regime 1
	Jun	16	Decay	0.52			
		17	Exposure	29.48	0.09%	0.55%	Regime 1
	Jul	18	Decay	13.01			
		19	Exposure	17.99	0.06%	0.60%	Regime 1
	Aug	20	Decay	5.28			
		21	Exposure	25.72	0.09%	0.69%	Regime 1
	Sep	22	Decay	5.35			
		23	Exposure	24.65	0.09%	0.78%	Regime 1
	Oct	24	Decay	0.73			
		25	Exposure	30.27	0.11%	0.89%	Regime 1
	Nov	26	Decay	6.13			
		27	Exposure	23.87	0.09%	0.99%	Regime 1
	Dec	28	Decay	0.06			
		29	Exposure	30.94	0.13%	1.11%	Regime 1
1956	Jan	30	Decay	5.55			
		31	Exposure	25.45	0.11%	1.22%	Regime 1
	Feb	32	Decay	6.07			
		33	Exposure	22.93	0.11%	1.33%	Regime 1
	Mar	34	Decay	1.59			
		35	Exposure	29.41	0.15%	1.48%	Regime 1
	Apr	36	Decay	7.09			
		37	Exposure	22.91	0.12%	1.59%	Regime 1
	May	38	Decay	5.01			
		39	Exposure	25.99	0.14%	1.74%	Regime 1
	Jun	40	Decay	8.25			
		41	Exposure	21.75	0.13%	1.86%	Regime 1
	Jul	42	Decay	6.55			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		43	Exposure	24.45	0.15%	2.02%	Regime 1
	Aug	44	Decay	5.32			
		45	Exposure	25.68	0.16%	2.18%	Regime 1
	Sep	46	Decay	4.73			
		47	Exposure	25.27	0.18%	2.35%	Regime 1
	Oct	48	Decay	7.06			
		49	Exposure	23.94	0.18%	2.53%	Regime 1
	Nov	50	Decay	4.25			
		51	Exposure	25.75	0.20%	2.74%	Regime 1
	Dec	52	Decay	7.48			
		53	Exposure	23.52	0.19%	2.93%	Regime 1
1957	**Jan**	54	Decay	6.06			
		55	Exposure	24.94	0.19%	3.12%	Regime 1
	Feb	56	Decay	1.78			
		57	Exposure	26.22	0.20%	3.32%	Regime 1
	Mar	58	Decay	2.46			
		59	Exposure	28.54	0.22%	3.54%	Regime 1
	Apr	60	Decay	0.09			
		61	Exposure	29.91	0.22%	3.76%	Regime 1
	May	62	Decay	25.99			
		63	Exposure	5.01	0.04%	3.80%	Regime 1
	Aug	64	Decay	74.14			
		65	Exposure	17.86	0.08%	3.88%	Regime 9
	Sep	66	Decay	0.10			
		67	Exposure	29.90	0.27%	4.15%	Regime 9
	Oct	68	Decay	5.48			
		69	Exposure	25.52	0.23%	4.38%	Regime 9
	Nov	70	Decay	0.07			
		71	Exposure	29.93	0.31%	4.69%	Regime 9
	Dec	72	Decay	10.48			
		73	Exposure	20.52	0.22%	4.91%	Regime 9
1958	**Jan**	74	Decay	1.69			
		75	Exposure	29.31	0.34%	5.24%	Regime 9
	Feb	76	Decay	6.48			
		77	Exposure	21.52	0.24%	5.49%	Regime 9
	Mar	78	Decay	1.20			
		79	Exposure	29.80	0.35%	5.84%	Regime 9
	Apr	80	Decay	4.86			
		81	Exposure	25.14	0.27%	6.11%	Regime 9
	May	82	Decay	0.06			
		83	Exposure	30.94	0.33%	6.43%	Regime 9
	Jun	84	Decay	6.98			
		85	Exposure	23.02	0.23%	6.67%	Regime 9
	Jul	86	Decay	0.01			
		87	Exposure	31.00	0.33%	7.00%	Regime 9

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Aug	88	Decay	2.80			
		89	Exposure	28.20	0.28%	7.28%	Regime 9
	Sep	90	Decay	0.01			
		91	Exposure	30.00	0.29%	7.57%	Regime 9
	Oct	92	Decay	6.70			
		93	Exposure	24.30	0.24%	7.81%	Regime 9
	Nov	94	Decay	2.07			
		95	Exposure	27.93	0.25%	8.06%	Regime 9
	Dec	96	Decay	0.56			
		97	Exposure	30.44	0.38%	8.44%	Regime 9
1959	Jan	98	Decay	2.92			
		99	Exposure	28.08	0.34%	8.78%	Regime 9
	Feb	100	Decay	6.72			
		101	Exposure	21.28	0.23%	9.01%	Regime 9
	Mar	102	Decay	2.79			
		103	Exposure	28.21	0.35%	9.36%	Regime 4
	Apr	104	Decay	6.67			
		105	Exposure	23.33	0.26%	9.63%	Regime 4
	May	106	Decay	0.62			
		107	Exposure	30.38	0.35%	9.98%	Regime 4
	Jun	108	Decay	6.68			
		109	Exposure	23.32	0.25%	10.23%	Regime 4
	Jul	110	Decay	4.86			
		111	Exposure	26.14	0.29%	10.52%	Regime 4
	Aug	112	Decay	2.95			
		113	Exposure	28.05	0.31%	10.83%	Regime 4
	Sep	114	Decay	5.78			
		115	Exposure	24.22	0.26%	11.09%	Regime 4
	Oct	116	Decay	0.01			
		117	Exposure	31.00	0.35%	11.44%	Regime 1
	Nov	118	Decay	3.74			
		119	Exposure	26.26	0.31%	11.75%	Regime 1
	Dec	120	Decay	9.66			
		121	Exposure	21.34	0.25%	12.01%	Regime 1
1960	Jan	122	Decay	0.11			
		123	Exposure	30.89	0.38%	12.39%	Regime 9
	Feb	124	Decay	0.11			
		125	Exposure	28.89	0.35%	12.74%	Regime 9
	Mar	126	Decay	0.05			
		127	Exposure	30.95	0.37%	13.11%	Regime 9
	Apr	128	Decay	4.90			
		129	Exposure	25.10	0.30%	13.41%	Regime 9
	May	130	Decay	1.91			
		131	Exposure	29.09	0.33%	13.74%	Regime 9
	Jun	132	Decay	0.01			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		133	Exposure	30.00	0.34%	14.08%	Regime 9
	Jul	134	Decay	0.01			
		135	Exposure	31.00	0.32%	14.40%	Regime 9
	Aug	136	Decay	10.23			
		137	Exposure	20.77	0.22%	14.62%	Regime 9
	Sep	138	Decay	0.24			
		139	Exposure	29.76	0.31%	14.92%	Regime 9
	Oct	140	Decay	0.01			
		141	Exposure	31.00	0.32%	15.24%	Regime 9
	Nov	142	Decay	0.01			
		143	Exposure	30.00	0.31%	15.55%	Regime 9
	Dec	144	Decay	6.66			
		145	Exposure	24.34	0.30%	15.86%	Regime 1
1961	Jan	146	Decay	5.46			
		147	Exposure	25.54	0.33%	16.19%	Regime 1
	Feb	148	Decay	0.85			
		149	Exposure	27.15	0.36%	16.54%	Regime 9
	Mar	150	Decay	3.66			
		151	Exposure	27.34	0.34%	16.88%	Regime 9
	Apr	152	Decay	0.01			
		153	Exposure	30.00	0.35%	17.24%	Regime 9
	May	154	Decay	4.19			
		155	Exposure	26.81	0.31%	17.54%	Regime 9
	Jun	156	Decay	0.01			
		157	Exposure	30.00	0.36%	17.91%	Regime 9
	Jul	158	Decay	0.01			
		159	Exposure	31.00	0.36%	18.27%	Regime 9
	Aug	160	Decay	7.00			
		161	Exposure	24.00	0.27%	18.54%	Regime 9
	Sep	162	Decay	0.01			
		163	Exposure	30.00	0.38%	18.92%	Regime 1
	Oct	164	Decay	2.57			
		165	Exposure	28.43	0.37%	19.28%	Regime 1
	Nov	166	Decay	3.82			
		167	Exposure	26.18	0.33%	19.62%	Regime 1
	Dec	168	Decay	0.01			
		169	Exposure	31.00	0.40%	20.02%	Regime 9
1962	Jan	170	Decay	0.01			
		171	Exposure	31.00	0.41%	20.43%	Regime 9
	Feb	172	Decay	3.17			
		173	Exposure	24.83	0.31%	20.74%	Regime 9
	Mar	174	Decay	4.11			
		175	Exposure	26.89	0.34%	21.08%	Regime 9
	Apr	176	Decay	0.18			
		177	Exposure	29.82	0.37%	21.46%	Regime 9

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	May	178	Decay	1.18			
		179	Exposure	29.82	0.32%	21.78%	Regime 9
	Jun	180	Decay	7.07			
		181	Exposure	22.93	0.26%	22.04%	Regime 9
	Jul	182	Decay	1.30			
		183	Exposure	29.70	0.36%	22.40%	Regime 1
	Aug	184	Decay	5.84			
		185	Exposure	25.16	0.30%	22.70%	Regime 1
	Sep	186	Decay	2.82			
		187	Exposure	27.18	0.34%	23.04%	Regime 1
	Oct	188	Decay	4.10			
		189	Exposure	26.90	0.34%	23.38%	Regime 1
	Nov	190	Decay	3.82			
		191	Exposure	26.18	0.34%	23.72%	Regime 1
	Dec	192	Decay	1.57			
		193	Exposure	29.43	0.42%	24.14%	Regime 1
1963	Jan	194	Decay	30.17			
		195	Exposure	0.83	0.01%	24.15%	Regime 1
	Feb	196	Decay	23.63			
		197	Exposure	4.37	0.04%	24.20%	Regime 1
	Mar	198	Decay	1.59			
		199	Exposure	29.41	0.42%	24.61%	Regime 1
	Apr	200	Decay	9.84			
		201	Exposure	20.16	0.30%	24.91%	Regime 1
	May	202	Decay	2.27			
		203	Exposure	28.73	0.39%	25.30%	Regime 1
	Jun	204	Decay	8.41			
		205	Exposure	21.59	0.27%	25.56%	Regime 1
	Jul	206	Decay	6.62			
		207	Exposure	24.38	0.29%	25.85%	Regime 1
	Aug	208	Decay	3.36			
		209	Exposure	27.64	0.34%	26.19%	Regime 1
	Sep	210	Decay	1.54			
		211	Exposure	28.46	0.37%	26.56%	Regime 1
	Oct	212	Decay	7.90			
		213	Exposure	23.10	0.28%	26.84%	Regime 1
	Nov	214	Decay	4.30			
		215	Exposure	25.70	0.35%	27.19%	Regime 1
	Dec	216	Decay	4.62			
		217	Exposure	26.38	0.38%	27.57%	Regime 1
1964	Jan	218	Decay	2.12			
		219	Exposure	28.88	0.43%	28.00%	Regime 1
	Feb	220	Decay	6.04			
		221	Exposure	22.96	0.32%	28.32%	Regime 1
	Mar	222	Decay	2.67			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		223	Exposure	28.33	0.40%	28.72%	Regime 1
	Apr	224	Decay	8.73			
		225	Exposure	21.27	0.28%	29.00%	Regime 1
	May	226	Decay	8.56			
		227	Exposure	22.44	0.32%	29.32%	Regime 1
	Jun	228	Decay	27.90			
		229	Exposure	2.10	0.01%	29.33%	Regime 1
	Jul	230	Decay	1.43			
		231	Exposure	29.57	0.40%	29.73%	Regime 1
	Aug	232	Decay	10.55			
		233	Exposure	20.45	0.27%	30.00%	Regime 1
	Sep	234	Decay	3.35			
		235	Exposure	26.65	0.31%	30.30%	Regime 7
	Oct	236	Decay	0.71			
		237	Exposure	30.29	0.41%	30.72%	Regime 7
	Nov	238	Decay	0.01			
		239	Exposure	30.00	0.43%	31.15%	Regime 7
	Dec	240	Decay	6.63			
		241	Exposure	24.37	0.34%	31.49%	Regime 7
1965	Jan	242	Decay	0.88			
		243	Exposure	30.12	0.45%	31.94%	Regime 7
	Feb	244	Decay	7.43			
		245	Exposure	20.57	0.22%	32.16%	Regime 7
	Mar	246	Decay	7.85			
		247	Exposure	23.15	0.26%	32.43%	Regime10
	Apr	248	Decay	5.54			
		249	Exposure	24.46	0.28%	32.70%	Regime10
	May	250	Decay	5.28			
		251	Exposure	25.72	0.28%	32.99%	Regime10
	Jun	252	Decay	2.95			
		253	Exposure	27.05	0.31%	33.29%	Regime10
	Jul	254	Decay	8.85			
		255	Exposure	22.15	0.23%	33.53%	Regime10
	Aug	256	Decay	9.18			
		257	Exposure	21.82	0.23%	33.76%	Regime10
	Sep	258	Decay	5.66			
		259	Exposure	24.34	0.29%	34.04%	Regime10
	Oct	260	Decay	3.76			
		261	Exposure	27.24	0.37%	34.41%	Regime 7
	Nov	262	Decay	4.10			
		263	Exposure	25.90	0.36%	34.77%	Regime 7
	Dec	264	Decay	23.58			
		265	Exposure	7.42	0.04%	34.82%	Curium-II
1966	Jan	266	Decay	8.27			
		267	Exposure	22.73	0.17%	34.99%	Curium-II

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Feb	268	Decay	6.70			
		269	Exposure	21.30	0.18%	35.17%	Curium-II
	Mar	270	Decay	8.82			
		271	Exposure	22.18	0.20%	35.37%	Curium-II
	Apr	272	Decay	6.85			
		273	Exposure	23.15	0.21%	35.57%	Curium-II
	May	274	Decay	7.45			
		275	Exposure	23.55	0.23%	35.80%	Curium-II
	Jun	276	Decay	7.05			
		277	Exposure	22.95	0.22%	36.02%	Curium-II
	Jul	278	Decay	11.33			
		279	Exposure	19.67	0.17%	36.20%	Curium-II
	Aug	280	Decay	11.43			
		281	Exposure	19.57	0.17%	36.36%	Curium-II
	Sep	282	Decay	14.28			
		283	Exposure	15.72	0.12%	36.49%	Curium-II
	Oct	284	Decay	8.43			
		285	Exposure	22.57	0.23%	36.72%	Curium-II
	Nov	286	Decay	7.37			
		287	Exposure	22.63	0.24%	36.96%	Curium-II
	Dec	288	Decay	6.90			
		289	Exposure	24.10	0.26%	37.22%	Curium-II
1967	Jan	290	Decay	9.42			
		291	Exposure	21.58	0.23%	37.45%	Curium-II
	Feb	292	Decay	8.30			
		293	Exposure	19.70	0.20%	37.65%	Curium-II
	Mar	294	Decay	11.03			
		295	Exposure	19.97	0.20%	37.85%	Curium-II
	Apr	296	Decay	8.80			
		297	Exposure	21.20	0.20%	38.05%	Curium-II
	May	298	Decay	21.65			
		299	Exposure	9.35	0.10%	38.15%	Curium-II
	Jun	300	Decay	6.92			
		301	Exposure	23.08	0.20%	38.35%	Regime11
	Jul	302	Decay	11.86			
		303	Exposure	19.14	0.19%	38.54%	Regime11
	Aug	304	Decay	11.40			
		305	Exposure	19.60	0.19%	38.72%	Regime11
	Sep	306	Decay	6.53			
		307	Exposure	23.47	0.24%	38.96%	Regime11
	Oct	308	Decay	6.08			
		309	Exposure	24.92	0.28%	39.23%	Regime11
	Nov	310	Decay	5.78			
		311	Exposure	24.22	0.28%	39.52%	Regime11
	Dec	312	Decay	5.14			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		313	Exposure	25.86	0.32%	39.83%	Regime11
1968	Jan	314	Decay	8.15			
		315	Exposure	22.85	0.27%	40.10%	Regime11
	Feb	316	Decay	3.62			
		317	Exposure	25.38	0.32%	40.42%	Regime11
	Mar	318	Decay	7.80			
		319	Exposure	23.20	0.28%	40.70%	Regime11
	Apr	320	Decay	6.50			
		321	Exposure	23.50	0.30%	41.00%	Regime11
	May	322	Decay	2.40			
		323	Exposure	28.60	0.37%	41.37%	Regime 1
	Jun	324	Decay	2.00			
		325	Exposure	28.00	0.38%	41.75%	Regime 1
	Jul	326	Decay	4.89			
		327	Exposure	26.11	0.34%	42.09%	Regime 1
	Aug	328	Decay	0.01			
		329	Exposure	31.00	0.42%	42.51%	Regime 1
	Sep	330	Decay	15.22			
		331	Exposure	14.78	0.16%	42.67%	Regime 1
	Oct	332	Decay	2.36			
		333	Exposure	28.64	0.31%	42.98%	Regime 3
	Nov	334	Decay	6.29			
		335	Exposure	23.71	0.26%	43.24%	Regime 3
	Dec	336	Decay	5.73			
		337	Exposure	25.27	0.30%	43.54%	Regime 3
1969	Jan	338	Decay	3.06			
		339	Exposure	27.94	0.33%	43.87%	Regime 3
	Feb	340	Decay	7.24			
		341	Exposure	20.76	0.25%	44.13%	Regime 3
	Mar	342	Decay	0.48			
		343	Exposure	30.52	0.42%	44.55%	Regime 3
	Apr	344	Decay	5.38			
		345	Exposure	24.62	0.30%	44.84%	Regime 3
	May	346	Decay	4.83			
		347	Exposure	26.17	0.33%	45.17%	Regime 3
	Jun	348	Decay	4.99			
		349	Exposure	25.01	0.30%	45.47%	Regime 3
	Jul	350	Decay	19.69			
		351	Exposure	11.31	0.11%	45.58%	Regime 3
	Aug	352	Decay	19.35			
		353	Exposure	11.65	0.06%	45.64%	Californium-I
	Sep	354	Decay	6.28			
		355	Exposure	23.72	0.15%	45.79%	Californium-I
	Oct	356	Decay	4.22			
		357	Exposure	26.78	0.19%	45.98%	Californium-I

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Nov	358	Decay	5.26			
		359	Exposure	24.74	0.21%	46.19%	Californium-I
	Dec	360	Decay	7.17			
		361	Exposure	23.83	0.21%	46.41%	Californium-I
1970	Jan	362	Decay	6.11			
		363	Exposure	24.89	0.20%	46.61%	Californium-I
	Feb	364	Decay	4.46			
		365	Exposure	23.54	0.18%	46.79%	Californium-I
	Mar	366	Decay	8.72			
		367	Exposure	22.28	0.17%	46.96%	Californium-I
	Apr	368	Decay	5.52			
		369	Exposure	24.48	0.18%	47.14%	Californium-I
	May	370	Decay	7.57			
		371	Exposure	23.43	0.17%	47.31%	Californium-I
	Jun	372	Decay	4.98			
		373	Exposure	25.02	0.18%	47.49%	Californium-I
	Jul	374	Decay	5.38			
		375	Exposure	25.62	0.18%	47.68%	Californium-I
	Aug	376	Decay	4.55			
		377	Exposure	26.45	0.19%	47.87%	Californium-I
	Sep	378	Decay	6.01			
		379	Exposure	23.99	0.17%	48.04%	Californium-I
	Oct	380	Decay	6.01			
		381	Exposure	24.99	0.17%	48.21%	Californium-I
	Nov	382	Decay	22.94			
		383	Exposure	7.06	0.05%	48.26%	Californium-I
1971	Mar	384	Decay	104.45			
		385	Exposure	16.55	0.14%	48.40%	Regime 3
	Apr	386	Decay	2.08			
		387	Exposure	27.92	0.29%	48.69%	Regime 3
	May	388	Decay	5.01			
		389	Exposure	25.99	0.27%	48.95%	Regime 3
	Jun	390	Decay	7.05			
		391	Exposure	22.95	0.25%	49.20%	Regime 3
	Jul	392	Decay	9.82			
		393	Exposure	21.18	0.25%	49.45%	Regime 3
	Aug	394	Decay	7.04			
		395	Exposure	23.96	0.22%	49.67%	Regime 3
	Sep	396	Decay	3.38			
		397	Exposure	26.62	0.28%	49.95%	Regime 3
	Oct	398	Decay	4.86			
		399	Exposure	26.14	0.29%	50.24%	Regime 3
	Nov	400	Decay	12.05			
		401	Exposure	17.95	0.19%	50.43%	Regime 3
	Dec	402	Decay	4.68			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		403	Exposure	26.32	0.28%	50.72%	Regime 3
1972	Jan	404	Decay	4.10			
		405	Exposure	26.90	0.33%	51.05%	Regime 3
	Feb	406	Decay	12.71			
		407	Exposure	16.29	0.19%	51.23%	Regime 3
	Mar	408	Decay	5.71			
		409	Exposure	25.29	0.26%	51.50%	Regime 3
	Apr	410	Decay	0.98			
		411	Exposure	29.02	0.32%	51.82%	Regime 3
	May	412	Decay	2.02			
		413	Exposure	28.98	0.30%	52.12%	Regime 3
	Jun	414	Decay	8.00			
		415	Exposure	22.00	0.23%	52.34%	Regime 3
	Jul	416	Decay	22.58			
		417	Exposure	8.42	0.08%	52.42%	Regime 3
	Aug	418	Decay	0.01			
		419	Exposure	31.00	0.41%	52.83%	Regime 8
	Sep	420	Decay	1.79			
		421	Exposure	28.21	0.36%	53.19%	Regime 8
	Oct	422	Decay	3.85			
		423	Exposure	27.15	0.28%	53.47%	Regime 8
	Nov	424	Decay	0.01			
		425	Exposure	30.00	0.32%	53.79%	Regime 8
	Dec	426	Decay	10.98			
		427	Exposure	20.02	0.21%	54.00%	Regime 3
1973	Jan	428	Decay	2.97			
		429	Exposure	28.03	0.37%	54.38%	Regime 3
	Feb	430	Decay	5.49			
		431	Exposure	22.51	0.30%	54.68%	Regime 3
	Mar	432	Decay	17.53			
		433	Exposure	13.47	0.11%	54.78%	Regime 3
	Apr	434	Decay	1.02			
		435	Exposure	28.98	0.34%	55.12%	Regime 3
	May	436	Decay	4.21			
		437	Exposure	26.79	0.30%	55.42%	Regime 3
	Jun	438	Decay	2.35			
		439	Exposure	27.65	0.30%	55.71%	Regime 3
	Jul	440	Decay	4.01			
		441	Exposure	26.99	0.28%	55.99%	Regime 3
	Aug	442	Decay	0.92			
		443	Exposure	30.08	0.29%	56.28%	Regime 3
	Sep	444	Decay	0.07			
		445	Exposure	29.93	0.32%	56.60%	Regime 3
	Oct	446	Decay	8.66			
		447	Exposure	22.34	0.21%	56.81%	Regime 3

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Nov	448	Decay	0.01			
		449	Exposure	30.00	0.36%	57.17%	Regime 3
	Dec	450	Decay	5.04			
		451	Exposure	25.96	0.31%	57.48%	Regime 3
1974	Jan	452	Decay	0.87			
		453	Exposure	30.13	0.38%	57.86%	Regime 3
	Feb	454	Decay	5.05			
		455	Exposure	22.95	0.25%	58.11%	Regime 3
	Mar	456	Decay	2.97			
		457	Exposure	28.03	0.34%	58.45%	Regime 3
	Apr	458	Decay	18.32			
		459	Exposure	11.68	0.11%	58.56%	Regime 8
	May	460	Decay	0.74			
		461	Exposure	30.26	0.40%	58.96%	Regime 8
	Jun	462	Decay	1.18			
		463	Exposure	28.82	0.37%	59.32%	Regime 8
	Jul	464	Decay	5.03			
		465	Exposure	25.97	0.33%	59.66%	Regime 8
	Aug	466	Decay	3.17			
		467	Exposure	27.83	0.27%	59.92%	Regime 8
	Sep	468	Decay	15.84			
		469	Exposure	14.16	0.14%	60.06%	Regime 8
	Oct	470	Decay	6.30			
		471	Exposure	24.70	0.25%	60.31%	Regime 8
	Nov	472	Decay	0.01			
		473	Exposure	30.00	0.33%	60.64%	Regime 8
	Dec	474	Decay	0.01			
		475	Exposure	31.00	0.36%	61.00%	Regime 8
1975	Jan	476	Decay	5.37			
		477	Exposure	25.63	0.28%	61.28%	Regime 8
	Mar	478	Decay	44.87			
		479	Exposure	14.13	0.16%	61.44%	Regime 8
	Apr	480	Decay	19.12			
		481	Exposure	10.88	0.08%	61.52%	Regime 3
	May	482	Decay	4.15			
		483	Exposure	26.85	0.29%	61.81%	Regime 3
	Jun	484	Decay	8.45			
		485	Exposure	21.55	0.25%	62.06%	Regime 3
	Jul	486	Decay	20.91			
		487	Exposure	10.09	0.07%	62.13%	Regime 3
	Aug	488	Decay	0.01			
		489	Exposure	31.00	0.33%	62.45%	Regime 3
	Sep	490	Decay	2.50			
		491	Exposure	27.50	0.32%	62.77%	Regime 3
	Oct	492	Decay	7.67			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		493	Exposure	23.33	0.23%	63.00%	Regime 3
	Nov	494	Decay	4.53			
		495	Exposure	25.47	0.28%	63.28%	Regime 3
	Dec	496	Decay	6.29			
		497	Exposure	24.71	0.24%	63.52%	Regime 3
1976	Jan	498	Decay	7.52			
		499	Exposure	23.48	0.24%	63.76%	Regime 3
	Feb	500	Decay	11.91			
		501	Exposure	17.09	0.17%	63.92%	Regime 3
	Mar	502	Decay	0.87			
		503	Exposure	30.13	0.34%	64.26%	Regime 3
	Apr	504	Decay	10.32			
		505	Exposure	19.68	0.21%	64.47%	Regime 3
	May	506	Decay	0.90			
		507	Exposure	30.10	0.34%	64.81%	Regime 3
	Jun	508	Decay	4.69			
		509	Exposure	25.31	0.26%	65.07%	Regime 3
	Jul	510	Decay	2.02			
		511	Exposure	28.98	0.28%	65.35%	Regime 3
	Aug	512	Decay	6.31			
		513	Exposure	24.69	0.25%	65.60%	Regime 3
	Sep	514	Decay	0.01			
		515	Exposure	30.00	0.28%	65.88%	Regime 3
	Oct	516	Decay	14.17			
		517	Exposure	16.83	0.16%	66.04%	Regime 3
	Dec	518	Decay	45.96			
		519	Exposure	15.04	0.15%	66.19%	Regime 3
1977	Jan	520	Decay	1.05			
		521	Exposure	29.95	0.35%	66.54%	Regime 3
	Feb	522	Decay	10.51			
		523	Exposure	17.49	0.19%	66.73%	Regime 3
	Mar	524	Decay	2.51			
		525	Exposure	28.49	0.34%	67.07%	Regime 3
	Apr	526	Decay	6.89			
		527	Exposure	23.11	0.27%	67.33%	Regime 3
	May	528	Decay	4.34			
		529	Exposure	26.66	0.29%	67.63%	Regime 3
	Jun	530	Decay	11.48			
		531	Exposure	18.52	0.17%	67.80%	Regime 3
	Jul	532	Decay	3.30			
		533	Exposure	27.70	0.28%	68.08%	Regime 3
	Aug	534	Decay	11.19			
		535	Exposure	19.81	0.21%	68.28%	Regime 3
	Nov	536	Decay	81.36			
		537	Exposure	9.64	0.09%	68.37%	Regime 3

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Dec	538	Decay	5.45			
		539	Exposure	25.55	0.28%	68.65%	Regime 3
1978	Jan	540	Decay	11.88			
		541	Exposure	19.12	0.24%	68.89%	Regime 3
	Feb	542	Decay	0.87			
		543	Exposure	27.13	0.31%	69.20%	Regime 3
	Mar	544	Decay	4.30			
		545	Exposure	26.70	0.35%	69.55%	Regime 3
	Apr	546	Decay	8.77			
		547	Exposure	21.23	0.21%	69.76%	Regime 3
	May	548	Decay	0.91			
		549	Exposure	30.09	0.35%	70.12%	Regime 3
	Jun	550	Decay	17.27			
		551	Exposure	12.73	0.11%	70.22%	Regime 3
	Jul	552	Decay	5.41			
		553	Exposure	25.59	0.26%	70.48%	Regime 3
	Aug	554	Decay	18.30			
		555	Exposure	12.70	0.15%	70.62%	Regime 3
	Sep	556	Decay	7.05			
		557	Exposure	22.95	0.24%	70.86%	Regime 3
	Oct	558	Decay	1.46			
		559	Exposure	29.54	0.36%	71.22%	Regime 3
	Dec	560	Decay	49.47			
		561	Exposure	11.53	0.10%	71.32%	Regime 3
1979	Jan	562	Decay	0.01			
		563	Exposure	31.00	0.39%	71.72%	Regime 3
	Feb	564	Decay	15.04			
		565	Exposure	12.96	0.15%	71.87%	Regime 3
	Mar	566	Decay	0.01			
		567	Exposure	31.00	0.37%	72.24%	Regime 3
	Apr	568	Decay	11.18			
		569	Exposure	18.82	0.23%	72.47%	Regime 3
	May	570	Decay	0.01			
		571	Exposure	31.00	0.34%	72.82%	Regime 3
	Jun	572	Decay	14.62			
		573	Exposure	15.38	0.18%	72.99%	Regime 3
	Sep	574	Decay	72.75			
		575	Exposure	19.25	0.18%	73.17%	Regime 3
	Oct	576	Decay	5.61			
		577	Exposure	25.39	0.29%	73.47%	Regime 3
	Nov	578	Decay	13.76			
		579	Exposure	16.24	0.20%	73.66%	Regime 3
	Dec	580	Decay	13.08			
		581	Exposure	17.92	0.21%	73.87%	Regime 3
1980	Jan	582	Decay	0.80			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		583	Exposure	30.20	0.40%	74.27%	Regime 3
	Feb	584	Decay	10.65			
		585	Exposure	18.35	0.20%	74.47%	Regime 3
	Mar	586	Decay	3.84			
		587	Exposure	27.16	0.35%	74.82%	Regime 3
	Apr	588	Decay	8.66			
		589	Exposure	21.34	0.25%	75.07%	Regime 3
	May	590	Decay	5.21			
		591	Exposure	25.79	0.32%	75.39%	Regime 3
	Jun	592	Decay	28.51			
		593	Exposure	1.49	0.01%	75.40%	Regime 3
	Jul	594	Decay	3.37			
		595	Exposure	27.63	0.32%	75.71%	Regime 3
	Aug	596	Decay	6.25			
		597	Exposure	24.75	0.31%	76.03%	Regime 3
	Sep	598	Decay	3.66			
		599	Exposure	26.34	0.31%	76.34%	Regime 3
	Oct	600	Decay	5.21			
		601	Exposure	25.79	0.34%	76.68%	Regime 3
	Nov	602	Decay	10.54			
		603	Exposure	19.46	0.22%	76.91%	Regime 3
	Dec	604	Decay	5.50			
		605	Exposure	25.50	0.35%	77.26%	Regime 3
1981	**Jan**	606	Decay	7.63			
		607	Exposure	23.37	0.29%	77.55%	Regime 3
	Feb	608	Decay	12.25			
		609	Exposure	15.75	0.23%	77.78%	Regime 3
	Apr	610	Decay	60.80			
		611	Exposure	0.20	0.00%	77.78%	Regime 8
	May	612	Decay	5.91			
		613	Exposure	25.09	0.31%	78.09%	Regime 8
	Jun	614	Decay	6.05			
		615	Exposure	23.95	0.30%	78.39%	Regime 8
	Jul	616	Decay	2.99			
		617	Exposure	28.01	0.34%	78.73%	Regime 8
	Aug	618	Decay	5.10			
		619	Exposure	25.90	0.32%	79.05%	Regime 8
	Sep	620	Decay	6.67			
		621	Exposure	23.33	0.29%	79.34%	Regime 8
	Oct	622	Decay	1.86			
		623	Exposure	29.14	0.38%	79.72%	Regime 8
	Nov	624	Decay	3.62			
		625	Exposure	26.38	0.36%	80.09%	Regime 8
	Dec	626	Decay	0.01			
		627	Exposure	31.00	0.46%	80.55%	Regime 8

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
1982	Jan	628	Decay	28.58			
		629	Exposure	2.42	0.03%	80.58%	Regime 8
	Mar	630	Decay	28.03			
		631	Exposure	30.97	0.42%	81.00%	Regime 8
	Apr	632	Decay	0.04			
		633	Exposure	29.96	0.42%	81.43%	Regime 8
	May	634	Decay	1.02			
		635	Exposure	29.98	0.40%	81.82%	Regime 8
	Jun	636	Decay	2.04			
		637	Exposure	27.96	0.36%	82.19%	Regime 8
	Jul	638	Decay	1.26			
		639	Exposure	29.74	0.38%	82.57%	Regime 8
	Aug	640	Decay	0.01			
		641	Exposure	31.00	0.40%	82.97%	Regime 8
	Sep	642	Decay	2.51			
		643	Exposure	27.49	0.35%	83.32%	Regime 8
	Oct	644	Decay	17.82			
		645	Exposure	13.18	0.15%	83.47%	Regime 8
	Nov	646	Decay	0.61			
		647	Exposure	29.39	0.41%	83.87%	Regime 8
	Dec	648	Decay	2.07			
		649	Exposure	28.93	0.42%	84.30%	Regime 8
1983	Jan	650	Decay	1.42			
		651	Exposure	29.58	0.47%	84.77%	Regime 8
	Feb	652	Decay	10.34			
		653	Exposure	17.66	0.26%	85.03%	Regime 8
	Mar	654	Decay	4.72			
		655	Exposure	26.28	0.40%	85.43%	Regime 8
	Apr	656	Decay	2.31			
		657	Exposure	27.69	0.39%	85.82%	Regime 8
	May	658	Decay	0.01			
		659	Exposure	31.00	0.43%	86.25%	Regime 8
	Jun	660	Decay	21.28			
		661	Exposure	8.72	0.12%	86.37%	Regime 8
	Aug	662	Decay	32.95			
		663	Exposure	29.05	0.35%	86.72%	Regime 3
	Sep	664	Decay	15.67			
		665	Exposure	14.33	0.18%	86.90%	Regime 3
	Oct	666	Decay	5.50			
		667	Exposure	25.50	0.34%	87.24%	Regime 3
	Nov	668	Decay	5.16			
		669	Exposure	24.84	0.34%	87.58%	Regime 3
	Dec	670	Decay	5.18			
		671	Exposure	25.82	0.38%	87.96%	Regime 3
1984	Jan	672	Decay	8.47			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		673	Exposure	22.53	0.34%	88.30%	Regime 3
	Feb	674	Decay	9.20			
		675	Exposure	19.80	0.30%	88.60%	Regime 3
	Mar	676	Decay	11.70			
		677	Exposure	19.30	0.27%	88.87%	Regime 3
	Apr	678	Decay	6.15			
		679	Exposure	23.85	0.33%	89.20%	Regime 3
	May	680	Decay	9.67			
		681	Exposure	21.33	0.30%	89.50%	Regime 3
	Jun	682	Decay	12.45			
		683	Exposure	17.55	0.21%	89.71%	Regime 3
	Jul	684	Decay	9.12			
		685	Exposure	21.88	0.28%	89.99%	Regime 3
	Aug	686	Decay	6.70			
		687	Exposure	24.30	0.32%	90.31%	Regime 3
	Sep	688	Decay	0.01			
		689	Exposure	30.00	0.40%	90.71%	Regime 3
	Oct	690	Decay	10.95			
		691	Exposure	20.05	0.25%	90.96%	Regime 3
	Nov	692	Decay	29.92			
		693	Exposure	0.08	0.00%	90.96%	Regime 3
	Dec	694	Decay	10.04			
		695	Exposure	20.96	0.28%	91.25%	Regime 3
1985	**Jan**	696	Decay	7.75			
		697	Exposure	23.25	0.34%	91.59%	Regime 3
	Feb	698	Decay	7.63			
		699	Exposure	20.37	0.29%	91.88%	Regime 3
	Mar	700	Decay	7.58			
		701	Exposure	23.42	0.33%	92.21%	Regime 3
	Apr	702	Decay	7.96			
		703	Exposure	22.04	0.29%	92.50%	Regime 3
	May	704	Decay	8.53			
		705	Exposure	22.47	0.30%	92.80%	Regime 3
	Jun	706	Decay	13.67			
		707	Exposure	16.33	0.22%	93.02%	Regime 3
	Jul	708	Decay	3.98			
		709	Exposure	27.02	0.34%	93.36%	Regime 3
	Aug	710	Decay	6.97			
		711	Exposure	24.03	0.30%	93.66%	Regime 3
	Sep	712	Decay	8.51			
		713	Exposure	21.49	0.28%	93.94%	Regime 3
	Oct	714	Decay	9.10			
		715	Exposure	21.90	0.28%	94.22%	Regime 3
	Nov	716	Decay	9.77			
		717	Exposure	20.23	0.26%	94.48%	Regime 3

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Dec	718	Decay	1.84			
		719	Exposure	29.16	0.43%	94.91%	Regime 3
1986	**Jan**	720	Decay	25.83			
		721	Exposure	5.17	0.08%	94.99%	Regime 3
	Mar	722	Decay	43.32			
		723	Exposure	15.68	0.19%	95.18%	Regime 3
	Apr	724	Decay	12.39			
		725	Exposure	17.61	0.22%	95.40%	Regime 3
	May	726	Decay	6.35			
		727	Exposure	24.65	0.32%	95.72%	Regime 3
	Jun	728	Decay	7.17			
		729	Exposure	22.83	0.28%	96.00%	Regime 3
	Jul	730	Decay	13.83			
		731	Exposure	17.17	0.17%	96.18%	Regime 3
	Aug	732	Decay	24.75			
		733	Exposure	6.25	0.08%	96.25%	Regime 3
	Sep	734	Decay	4.62			
		735	Exposure	25.38	0.32%	96.58%	Regime 3
	Oct	736	Decay	4.84			
		737	Exposure	26.16	0.34%	96.91%	Regime 3
	Nov	738	Decay	0.75			
		739	Exposure	29.25	0.42%	97.33%	Regime 3
1987	**Mar**	740	Decay	104.55			
		741	Exposure	16.45	0.15%	97.48%	Regime 8
	Apr	742	Decay	0.04			
		743	Exposure	29.96	0.25%	97.73%	Regime 8
	May	744	Decay	0.01			
		745	Exposure	31.00	0.23%	97.96%	Regime 8
	Jun	746	Decay	9.60			
		747	Exposure	20.40	0.13%	98.09%	Regime 8
	Jul	748	Decay	1.24			
		749	Exposure	29.76	0.20%	98.29%	Regime 8
	Aug	750	Decay	0.01			
		751	Exposure	31.00	0.21%	98.50%	Regime 8
	Sep	752	Decay	12.82			
		753	Exposure	17.18	0.11%	98.61%	Regime 8
	Oct	754	Decay	4.41			
		755	Exposure	26.59	0.17%	98.78%	Regime 8
	Nov	756	Decay	7.43			
		757	Exposure	22.57	0.16%	98.94%	Regime 8
	Dec	758	Decay	0.01			
		759	Exposure	31.00	0.25%	99.19%	Regime 8
1988	**Jan**	760	Decay	4.69			
		761	Exposure	26.31	0.21%	99.40%	Regime 8
	Feb	762	Decay	1.52			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		763	Exposure	27.48	0.23%	99.63%	Regime 8
	Mar	764	Decay	0.01			
		765	Exposure	31.00	0.26%	99.88%	Regime 8
	Apr	766	Decay	20.87			
		767	Exposure	9.13	0.08%	99.96%	Regime 8
1992	Jun	768	Decay	1516.57			
		769	Exposure	5.43	0.00%	99.96%	Regime 8
	Jul	770	Decay	9.25			
		771	Exposure	21.75	0.04%	100.00%	Regime 8
Final Decay Through December 31, 2009		772	Decay	6417.24			

Table 19 Summary of Simulation History for L-Reactor

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
1954	Jul	1	Exposure	0.80	0.00%	0.00%	Regime 1
	Aug	2	Decay	18.01			
		3	Exposure	12.99	0.05%	0.06%	Regime 1
	Sep	4	Decay	2.47			
		5	Exposure	27.53	0.13%	0.18%	Regime 1
	Oct	6	Decay	4.10			
		7	Exposure	26.90	0.12%	0.31%	Regime 1
	Nov	8	Decay	17.02			
		9	Exposure	12.98	0.06%	0.36%	Regime 1
	Dec	10	Decay	0.41			
		11	Exposure	30.59	0.15%	0.52%	Regime 1
1955	Jan	12	Decay	0.55			
		13	Exposure	30.45	0.17%	0.69%	Regime 1
	Feb	14	Decay	14.09			
		15	Exposure	13.91	0.08%	0.77%	Regime 1
	Mar	16	Decay	2.18			
		17	Exposure	28.82	0.18%	0.94%	Regime 1
	Apr	18	Decay	0.60			
		19	Exposure	29.40	0.18%	1.12%	Regime 1
	May	20	Decay	9.37			
		21	Exposure	21.63	0.14%	1.26%	Regime 1
	Jun	22	Decay	0.01			
		23	Exposure	30.00	0.20%	1.46%	Regime 1
	Jul	24	Decay	16.59			
		25	Exposure	14.41	0.11%	1.57%	Regime 1
	Aug	26	Decay	0.93			
		27	Exposure	30.07	0.23%	1.80%	Regime 1
	Sep	28	Decay	5.51			
		29	Exposure	24.49	0.20%	1.99%	Regime 1
	Oct	30	Decay	1.17			
		31	Exposure	29.83	0.24%	2.23%	Regime 1
	Nov	32	Decay	4.38			
		33	Exposure	25.62	0.21%	2.44%	Regime 1
	Dec	34	Decay	3.23			
		35	Exposure	27.77	0.23%	2.67%	Regime 1
1956	Jan	36	Decay	0.38			
		37	Exposure	30.62	0.28%	2.95%	Regime 1
	Feb	38	Decay	8.28			
		39	Exposure	20.72	0.22%	3.17%	Regime 1
	Mar	40	Decay	4.95			
		41	Exposure	26.05	0.31%	3.48%	Regime 1
	Apr	42	Decay	9.69			
		43	Exposure	20.31	0.24%	3.72%	Regime 1
		44	Decay	3.67			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		45	Exposure	27.33	0.37%	4.10%	Regime 1
	Jun	46	Decay	7.55			
		47	Exposure	22.45	0.31%	4.40%	Regime 1
	Jul	48	Decay	5.42			
		49	Exposure	25.58	0.35%	4.75%	Regime 1
	Aug	50	Decay	4.13			
		51	Exposure	26.87	0.37%	5.12%	Regime 1
	Sep	52	Decay	8.22			
		53	Exposure	21.78	0.22%	5.34%	Regime 1
	Oct	54	Decay	4.14			
		55	Exposure	26.86	0.34%	5.68%	Regime 1
	Nov	56	Decay	2.40			
		57	Exposure	27.60	0.39%	6.07%	Regime 1
	Dec	58	Decay	9.99			
		59	Exposure	21.01	0.31%	6.38%	Regime 1
1957	Jan	60	Decay	0.10			
		61	Exposure	30.90	0.47%	6.84%	Regime 1
	Feb	62	Decay	0.01			
		63	Exposure	28.00	0.43%	7.28%	Regime 1
	Mar	64	Decay	4.85			
		65	Exposure	26.15	0.39%	7.67%	Regime 1
	Apr	66	Decay	0.01			
		67	Exposure	30.00	0.46%	8.13%	Regime 1
	May	68	Decay	5.01			
		69	Exposure	25.99	0.39%	8.51%	Regime 1
	Jun	70	Decay	0.01			
		71	Exposure	30.00	0.44%	8.95%	Regime 1
	Jul	72	Decay	5.56			
		73	Exposure	25.44	0.33%	9.28%	Regime 1
	Aug	74	Decay	1.65			
		75	Exposure	29.35	0.40%	9.68%	Regime 1
	Sep	76	Decay	28.00			
		77	Exposure	2.00	0.03%	9.71%	Regime 1
	Dec	78	Decay	68.78			
		79	Exposure	23.22	0.32%	10.03%	Regime 4
1958	Jan	80	Decay	6.91			
		81	Exposure	24.09	0.49%	10.52%	Regime 4
	Feb	82	Decay	7.07			
		83	Exposure	20.93	0.46%	10.98%	Regime 4
	Mar	84	Decay	0.01			
		85	Exposure	31.00	0.77%	11.74%	Regime 4
	Apr	86	Decay	10.19			
		87	Exposure	19.81	0.44%	12.18%	Regime 4
	May	88	Decay	0.01			
		89	Exposure	31.00	0.74%	12.92%	Regime 9
	Jun	90	Decay	4.88			
		91	Exposure	25.12	0.56%	13.48%	Regime 9

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Jul	92	Decay	0.04			
		93	Exposure	30.96	0.68%	14.16%	Regime 9
	Aug	94	Decay	6.04			
		95	Exposure	24.96	0.50%	14.66%	Regime 9
	Sep	96	Decay	0.01			
		97	Exposure	30.00	0.61%	15.27%	Regime 9
	Oct	98	Decay	5.19			
		99	Exposure	25.81	0.55%	15.82%	Regime 9
	Nov	100	Decay	0.01			
		101	Exposure	30.00	0.71%	16.54%	Regime 9
	Dec	102	Decay	5.13			
		103	Exposure	25.87	0.62%	17.16%	Regime 9
1959	Jan	104	Decay	1.95			
		105	Exposure	29.05	0.73%	17.89%	Regime 9
	Feb	106	Decay	6.67			
		107	Exposure	21.33	0.52%	18.41%	Regime 1
	Mar	108	Decay	4.42			
		109	Exposure	26.58	0.71%	19.12%	Regime 1
	Apr	110	Decay	9.81			
		111	Exposure	20.19	0.47%	19.59%	Regime 1
	May	112	Decay	11.78			
		113	Exposure	19.22	0.43%	20.01%	Regime 1
	Jun	114	Decay	2.70			
		115	Exposure	27.30	0.60%	20.61%	Regime 9
	Jul	116	Decay	0.25			
		117	Exposure	30.75	0.66%	21.26%	Regime 9
	Aug	118	Decay	0.01			
		119	Exposure	31.00	0.67%	21.94%	Regime 9
	Sep	120	Decay	0.01			
		121	Exposure	30.00	0.64%	22.58%	Regime 9
	Oct	122	Decay	8.15			
		123	Exposure	22.85	0.49%	23.07%	Regime 9
	Nov	124	Decay	0.01			
		125	Exposure	30.00	0.75%	23.82%	Regime 9
	Dec	126	Decay	1.30			
		127	Exposure	29.70	0.73%	24.55%	Regime 9
1960	Jan	128	Decay	6.21			
		129	Exposure	24.79	0.58%	25.14%	Regime 9
	Feb	130	Decay	0.10			
		131	Exposure	28.90	0.77%	25.91%	Regime 9
	Mar	132	Decay	0.01			
		133	Exposure	31.00	0.82%	26.74%	Regime 9
	Apr	134	Decay	2.63			
		135	Exposure	27.37	0.65%	27.39%	Regime 9
	May	136	Decay	6.93			
		137	Exposure	24.07	0.54%	27.93%	Regime 9
	Jun	138	Decay	0.01			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		139	Exposure	30.00	0.71%	28.64%	Regime 9
	Jul	140	Decay	0.01			
		141	Exposure	31.00	0.71%	29.35%	Regime 9
	Aug	142	Decay	0.01			
		143	Exposure	31.00	0.67%	30.02%	Regime 9
		144	Decay	7.89			
		145	Exposure	22.11	0.43%	30.45%	Regime 9
		146	Decay	0.01			
		147	Exposure	31.00	0.76%	31.20%	Regime 1
	Nov	148	Decay	9.66			
		149	Exposure	20.34	0.50%	31.71%	Regime 1
	Dec	150	Decay	5.15			
		151	Exposure	25.85	0.67%	32.38%	Regime 9
1961	Jan	152	Decay	0.01			
		153	Exposure	31.00	0.81%	33.19%	Regime 9
	Feb	154	Decay	3.57			
		155	Exposure	24.43	0.59%	33.78%	Regime 9
	Mar	156	Decay	7.15			
		157	Exposure	23.85	0.61%	34.40%	Regime 9
	Apr	158	Decay	3.12			
		159	Exposure	26.88	0.72%	35.12%	Regime 9
	May	160	Decay	1.49			
		161	Exposure	29.51	0.70%	35.82%	Regime 9
	Jun	162	Decay	5.10			
		163	Exposure	24.90	0.56%	36.38%	Regime 9
	Jul	164	Decay	0.01			
		165	Exposure	31.00	0.75%	37.13%	Regime 9
	Aug	166	Decay	1.05			
		167	Exposure	29.95	0.69%	37.83%	Regime 9
	Sep	168	Decay	0.57			
		169	Exposure	29.43	0.70%	38.52%	Regime 9
	Oct	170	Decay	7.67			
		171	Exposure	23.33	0.55%	39.08%	Regime 9
	Nov	172	Decay	2.87			
		173	Exposure	27.13	0.68%	39.76%	Regime 9
	Dec	174	Decay	0.01			
		175	Exposure	31.00	0.83%	40.59%	Regime 9
1962	Jan	176	Decay	2.91			
		177	Exposure	28.09	0.73%	41.31%	Regime 9
	Feb	178	Decay	7.81			
		179	Exposure	20.19	0.44%	41.76%	Regime 7
	Mar	180	Decay	0.17			
		181	Exposure	30.83	0.88%	42.64%	Regime 7
	Apr	182	Decay	0.13			
		183	Exposure	29.87	0.83%	43.47%	Regime 7
	May	184	Decay	0.13			
		185	Exposure	30.87	0.81%	44.28%	Regime 7

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Jun	186	Decay	1.01			
		187	Exposure	28.99	0.74%	45.02%	Regime 7
	Jul	188	Decay	0.01			
		189	Exposure	31.00	0.77%	45.79%	Regime 7
	Aug	190	Decay	5.33			
		191	Exposure	25.67	0.62%	46.41%	Regime 7
	Sep	192	Decay	0.01			
		193	Exposure	30.00	0.79%	47.20%	Regime 1
		194	Decay	28.30			
		195	Exposure	2.70	0.07%	47.27%	Regime 1
	Nov	196	Decay	22.12			
		197	Exposure	7.88	0.12%	47.39%	Regime 6
	Dec	198	Decay	0.82			
		199	Exposure	30.18	0.77%	48.16%	Regime 6
1963	Jan	200	Decay	0.01			
		201	Exposure	31.00	0.88%	49.04%	Regime 6
	Feb	202	Decay	0.01			
		203	Exposure	28.00	0.81%	49.85%	Regime 6
	Mar	204	Decay	0.01			
		205	Exposure	31.00	0.88%	50.73%	Regime 6
	Apr	206	Decay	4.15			
		207	Exposure	25.85	0.71%	51.44%	Regime 6
	May	208	Decay	0.01			
		209	Exposure	31.00	0.84%	52.29%	Regime 6
	Jun	210	Decay	7.55			
		211	Exposure	22.45	0.51%	52.79%	Regime 7
	Jul	212	Decay	0.01			
		213	Exposure	31.00	0.75%	53.54%	Regime 7
	Aug	214	Decay	0.01			
		215	Exposure	31.00	0.75%	54.29%	Regime 7
	Sep	216	Decay	0.01			
		217	Exposure	30.00	0.75%	55.04%	Regime 7
	Oct	218	Decay	0.90			
		219	Exposure	30.10	0.75%	55.79%	Regime 7
	Nov	220	Decay	0.42			
		221	Exposure	29.58	0.76%	56.55%	Regime 7
	Dec	222	Decay	1.70			
		223	Exposure	29.30	0.79%	57.33%	Regime 7
1964	Jan	224	Decay	10.97			
		225	Exposure	20.03	0.49%	57.82%	Regime 6
	Feb	226	Decay	1.64			
		227	Exposure	27.36	0.75%	58.57%	Regime 6
	Mar	228	Decay	4.74			
		229	Exposure	26.26	0.70%	59.27%	Regime 6
	Apr	230	Decay	4.62			
		231	Exposure	25.38	0.66%	59.93%	Regime 6
	May	232	Decay	2.10			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		233	Exposure	28.90	0.72%	60.65%	Regime 6
	Jun	234	Decay	0.31			
		235	Exposure	29.69	0.70%	61.35%	Regime 6
	Jul	236	Decay	9.05			
		237	Exposure	21.95	0.49%	61.83%	Regime 6
	Aug	238	Decay	4.61			
		239	Exposure	26.39	0.64%	62.47%	Regime 1
	Sep	240	Decay	4.41			
		241	Exposure	25.59	0.64%	63.11%	Regime 1
	Dec	242	Decay	63.32			
		243	Exposure	28.68	0.68%	63.79%	Regime 1
1965	Jan	244	Decay	6.03			
		245	Exposure	24.97	0.66%	64.46%	Regime 1
	Feb	246	Decay	1.57			
		247	Exposure	26.43	0.67%	65.13%	Regime 1
	Mar	248	Decay	6.58			
		249	Exposure	24.42	0.62%	65.75%	Regime 1
	Apr	250	Decay	6.29			
		251	Exposure	23.71	0.61%	66.35%	Regime 7
	May	252	Decay	5.86			
		253	Exposure	25.14	0.68%	67.03%	Regime 7
	Jun	254	Decay	1.64			
		255	Exposure	28.36	0.75%	67.78%	Regime 7
	Jul	256	Decay	0.12			
		257	Exposure	30.88	0.81%	68.59%	Regime 7
	Aug	258	Decay	1.26			
		259	Exposure	29.74	0.75%	69.34%	Regime 7
	Sep	260	Decay	5.32			
		261	Exposure	24.68	0.63%	69.97%	Regime 7
	Oct	262	Decay	2.02			
		263	Exposure	28.98	0.77%	70.74%	Regime 7
	Nov	264	Decay	3.44			
		265	Exposure	26.56	0.75%	71.49%	Regime 7
	Dec	266	Decay	12.37			
		267	Exposure	18.63	0.45%	71.94%	Regime 1
1966	Jan	268	Decay	3.88			
		269	Exposure	27.12	0.83%	72.76%	Regime 1
	Feb	270	Decay	0.95			
		271	Exposure	27.05	0.82%	73.58%	Regime 1
	Mar	272	Decay	11.10			
		273	Exposure	19.90	0.63%	74.21%	Regime 1
	Apr	274	Decay	4.58			
		275	Exposure	25.42	0.70%	74.91%	Regime 1
	May	276	Decay	1.68			
		277	Exposure	29.32	0.83%	75.74%	Regime 1
	Jun	278	Decay	9.61			
		279	Exposure	20.39	0.52%	76.26%	Regime 7

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Jul	280	Decay	0.01			
		281	Exposure	31.00	0.81%	77.07%	Regime 7
	Aug	282	Decay	1.89			
		283	Exposure	29.11	0.74%	77.81%	Regime 7
	Sep	284	Decay	0.01			
		285	Exposure	30.00	0.79%	78.59%	Regime 7
	Oct	286	Decay	0.01			
		287	Exposure	31.00	0.84%	79.43%	Regime 7
	Nov	288	Decay	0.01			
		289	Exposure	30.00	0.85%	80.28%	Regime 7
	Dec	290	Decay	1.00			
		291	Exposure	30.00	0.87%	81.15%	Regime 7
1967	Jan	292	Decay	3.60			
		293	Exposure	27.40	0.80%	81.94%	Regime 7
	Feb	294	Decay	6.76			
		295	Exposure	21.24	0.60%	82.55%	Regime 7
	Mar	296	Decay	4.03			
		297	Exposure	26.97	0.77%	83.32%	Regime 7
	Apr	298	Decay	0.04			
		299	Exposure	29.96	0.85%	84.17%	Regime 7
	May	300	Decay	3.23			
		301	Exposure	27.77	0.69%	84.86%	Regime 7
	Jun	302	Decay	4.58			
		303	Exposure	25.42	0.58%	85.44%	Regime 7
	Jul	304	Decay	5.77			
		305	Exposure	25.23	0.63%	86.07%	Regime 1
	Aug	306	Decay	0.90			
		307	Exposure	30.10	0.81%	86.89%	Regime 1
	Sep	308	Decay	0.01			
		309	Exposure	30.00	0.83%	87.72%	Regime 1
	Oct	310	Decay	5.30			
		311	Exposure	25.70	0.70%	88.42%	Regime 1
	Nov	312	Decay	1.75			
		313	Exposure	28.25	0.83%	89.24%	Regime 1
	Dec	314	Decay	0.01			
		315	Exposure	31.00	0.92%	90.17%	Regime 1
1968	Jan	316	Decay	12.92			
		317	Exposure	18.08	0.51%	90.68%	Regime 1
	Feb	318	Decay	11.21			
		319	Exposure	17.79	0.57%	91.25%	Regime 1
1985	Oct	320	Decay	6453.75			
		321	Exposure	0.25	0.00%	91.25%	Regime 3
	Nov	322	Decay	4.34			
		323	Exposure	25.66	0.54%	91.79%	Regime 3
	Dec	324	Decay	16.68			
		325	Exposure	14.32	0.41%	92.20%	Regime 3
1986	Jan	326	Decay	8.98			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		327	Exposure	22.02	0.66%	92.86%	Regime 3
	Feb	328	Decay	18.07			
		329	Exposure	9.93	0.29%	93.15%	Regime 3
	Mar	330	Decay	11.69			
		331	Exposure	19.31	0.56%	93.71%	Regime 3
	Apr	332	Decay	3.22			
		333	Exposure	26.78	0.70%	94.41%	Regime 3
	May	334	Decay	7.01			
		335	Exposure	23.99	0.47%	94.88%	Regime 3
	Jun	336	Decay	4.30			
		337	Exposure	25.70	0.20%	95.08%	Regime 3
	Dec	338	Decay	160.05			
		339	Exposure	23.95	0.50%	95.58%	Regime 3
1987	Jan	340	Decay	18.77			
		341	Exposure	12.23	0.26%	95.84%	Regime 3
	Feb	342	Decay	4.07			
		343	Exposure	23.93	0.57%	96.41%	Regime 3
	Mar	344	Decay	10.85			
		345	Exposure	20.15	0.37%	96.78%	Regime 3
	Apr	346	Decay	0.42			
		347	Exposure	29.58	0.38%	97.16%	Regime 3
	May	348	Decay	11.95			
		349	Exposure	19.05	0.17%	97.33%	Regime 3
	Jun	350	Decay	0.89			
		351	Exposure	29.11	0.25%	97.58%	Regime 3
	Jul	352	Decay	25.56			
		353	Exposure	5.44	0.04%	97.62%	Regime 3
	Nov	354	Decay	109.31			
		355	Exposure	12.69	0.15%	97.78%	Regime 3
	Dec	356	Decay	0.01			
		357	Exposure	31.00	0.45%	98.23%	Regime 3
1988	Jan	358	Decay	9.15			
		359	Exposure	21.85	0.30%	98.53%	Regime 3
	Feb	360	Decay	1.55			
		361	Exposure	27.45	0.37%	98.90%	Regime 3
	Mar	362	Decay	7.80			
		363	Exposure	23.20	0.28%	99.18%	Regime 3
	Apr	364	Decay	3.86			
		365	Exposure	26.14	0.29%	99.46%	Regime 3
	May	366	Decay	1.51			
		367	Exposure	29.49	0.32%	99.78%	Regime 3
	Jun	368	Decay	6.37			
		369	Exposure	23.63	0.22%	100.00%	Regime 3
Final Decay Through December 31, 2009		370	Decay	7915.20			

Table 20 Summary of Simulation History for C-Reactor

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
1955	Apr	1	Exposure	20.02	0.05%	0.05%	Regime C1
	May	2	Decay	2.91			
		3	Exposure	28.09	0.10%	0.15%	Regime C1
	Jun	4	Decay	7.81			
		5	Exposure	22.19	0.08%	0.23%	Regime C1
	Jul	6	Decay	1.38			
		7	Exposure	29.62	0.12%	0.35%	Regime C1
	Aug	8	Decay	8.20			
		9	Exposure	22.80	0.09%	0.44%	Regime C1
	Sep	10	Decay	2.14			
		11	Exposure	27.86	0.13%	0.57%	Regime C1
	Oct	12	Decay	5.24			
		13	Exposure	25.76	0.12%	0.69%	Regime C1
	Nov	14	Decay	0.63			
		15	Exposure	29.37	0.14%	0.83%	Regime C1
	Dec	16	Decay	3.79			
		17	Exposure	27.21	0.14%	0.97%	Regime C1
1956	Jan	18	Decay	4.29			
		19	Exposure	26.71	0.13%	1.10%	Regime C1
	Feb	20	Decay	1.21			
		21	Exposure	27.79	0.15%	1.25%	Regime C1
	Mar	22	Decay	5.89			
		23	Exposure	25.11	0.15%	1.40%	Regime C1
	Apr	24	Decay	6.37			
		25	Exposure	23.63	0.14%	1.54%	Regime C1
	May	26	Decay	5.39			
		27	Exposure	25.61	0.16%	1.70%	Regime C1
	Jun	28	Decay	2.40			
		29	Exposure	27.60	0.18%	1.88%	Regime C1
	Jul	30	Decay	6.25			
		31	Exposure	24.75	0.17%	2.05%	Regime C1
	Aug	32	Decay	5.08			
		33	Exposure	25.92	0.18%	2.23%	Regime C1
	Sep	34	Decay	5.13			
		35	Exposure	24.87	0.18%	2.40%	Regime C1
	Oct	36	Decay	5.24			
		37	Exposure	25.76	0.19%	2.60%	Regime C1
	Nov	38	Decay	5.57			
		39	Exposure	24.43	0.19%	2.79%	Regime C1
	Dec	40	Decay	6.04			
		41	Exposure	24.96	0.19%	2.98%	Regime C1
1957	Mar	42	Decay	68.32			
		43	Exposure	21.68	0.11%	3.09%	Regime C2
	Apr	44	Decay	1.29			
		45	Exposure	28.71	0.24%	3.33%	Regime C2

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	May	46	Decay	5.05			
		47	Exposure	25.95	0.26%	3.59%	Regime C2
	Jun	48	Decay	1.33			
		49	Exposure	28.67	0.29%	3.88%	Regime C2
	Jul	50	Decay	4.93			
		51	Exposure	26.07	0.27%	4.15%	Regime C2
	Aug	52	Decay	15.18			
		53	Exposure	15.82	0.16%	4.31%	Regime C2
	Sep	54	Decay	2.17			
		55	Exposure	27.83	0.28%	4.59%	Regime C2
	Oct	56	Decay	9.60			
		57	Exposure	21.40	0.20%	4.79%	Regime C2
	Nov	58	Decay	1.70			
		59	Exposure	28.30	0.31%	5.11%	Regime C2
	Dec	60	Decay	2.12			
		61	Exposure	28.88	0.35%	5.46%	Regime C2
1958	Jan	62	Decay	5.87			
		63	Exposure	25.13	0.30%	5.76%	Regime C2
	Feb	64	Decay	1.67			
		65	Exposure	26.33	0.33%	6.09%	Regime C2
	Mar	66	Decay	6.58			
		67	Exposure	24.42	0.29%	6.38%	Regime C2
	Apr	68	Decay	1.42			
		69	Exposure	28.58	0.32%	6.70%	Regime C2
	May	70	Decay	3.75			
		71	Exposure	27.25	0.29%	6.99%	Regime C2
	Jun	72	Decay	7.33			
		73	Exposure	22.67	0.22%	7.22%	Regime C2
	Jul	74	Decay	1.06			
		75	Exposure	29.94	0.31%	7.53%	Regime C2
	Aug	76	Decay	2.66			
		77	Exposure	28.34	0.30%	7.83%	Regime C2
	Sep	78	Decay	5.20			
		79	Exposure	24.80	0.26%	8.10%	Regime C2
	Oct	80	Decay	0.01			
		81	Exposure	31.00	0.35%	8.45%	Regime C2
	Nov	82	Decay	5.10			
		83	Exposure	24.90	0.28%	8.73%	Regime C2
	Dec	84	Decay	1.28			
		85	Exposure	29.72	0.37%	9.10%	Regime C2
1959	Jan	86	Decay	5.95			
		87	Exposure	25.05	0.32%	9.42%	Regime C2
	Feb	88	Decay	0.59			
		89	Exposure	27.41	0.34%	9.76%	Regime C2
	Mar	90	Decay	6.40			
		91	Exposure	24.60	0.30%	10.06%	Regime C1
	Apr	92	Decay	4.96			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		93	Exposure	25.04	0.29%	10.35%	Regime C1
	May	94	Decay	9.58			
		95	Exposure	21.42	0.23%	10.57%	Regime C2
	Jun	96	Decay	2.30			
		97	Exposure	27.70	0.30%	10.88%	Regime C2
	Jul	98	Decay	4.71			
		99	Exposure	26.29	0.27%	11.15%	Regime C2
	Aug	100	Decay	0.01			
		101	Exposure	31.00	0.34%	11.49%	Regime C1
	Sep	102	Decay	4.74			
		103	Exposure	25.26	0.27%	11.77%	Regime C1
	Oct	104	Decay	3.83			
		105	Exposure	27.17	0.31%	12.07%	Regime C1
	Nov	106	Decay	8.77			
		107	Exposure	21.23	0.24%	12.31%	Regime C1
	Dec	108	Decay	0.64			
		109	Exposure	30.36	0.39%	12.70%	Regime C1
1960	Jan	110	Decay	7.80			
		111	Exposure	23.20	0.29%	12.99%	Regime C1
	Feb	112	Decay	1.25			
		113	Exposure	27.75	0.37%	13.36%	Regime C1
	Mar	114	Decay	2.82			
		115	Exposure	28.18	0.37%	13.73%	Regime C1
	Apr	116	Decay	4.25			
		117	Exposure	25.75	0.32%	14.05%	Regime C1
	May	118	Decay	0.13			
		119	Exposure	30.87	0.35%	14.40%	Regime C2
	Jun	120	Decay	2.15			
		121	Exposure	27.85	0.29%	14.69%	Regime C2
	Jul	122	Decay	1.37			
		123	Exposure	29.63	0.31%	15.00%	Regime C2
	Aug	124	Decay	7.51			
		125	Exposure	23.49	0.24%	15.24%	Regime C2
	Sep	126	Decay	1.57			
		127	Exposure	28.43	0.31%	15.55%	Regime C1
	Oct	128	Decay	1.63			
		129	Exposure	29.37	0.34%	15.89%	Regime C1
	Nov	130	Decay	5.38			
		131	Exposure	24.62	0.30%	16.18%	Regime C1
	Dec	132	Decay	5.42			
		133	Exposure	25.58	0.34%	16.52%	Regime C1
1961	Jan	134	Decay	1.45			
		135	Exposure	29.55	0.40%	16.93%	Regime C1
	Feb	136	Decay	4.62			
		137	Exposure	23.38	0.31%	17.24%	Regime C1
	Mar	138	Decay	1.14			
		139	Exposure	29.86	0.40%	17.63%	Regime C2

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Apr	140	Decay	0.01			
		141	Exposure	30.00	0.39%	18.02%	Regime C2
	May	142	Decay	0.01			
		143	Exposure	31.00	0.37%	18.39%	Regime C2
	Jun	144	Decay	5.47			
		145	Exposure	24.53	0.29%	18.68%	Regime C2
	Jul	146	Decay	3.93			
		147	Exposure	27.07	0.32%	19.00%	Regime C2
	Aug	148	Decay	4.71			
		149	Exposure	26.29	0.30%	19.29%	Regime C2
	Sep	150	Decay	1.29			
		151	Exposure	28.71	0.33%	19.62%	Regime C2
	Oct	152	Decay	7.67			
		153	Exposure	23.33	0.27%	19.89%	Regime C1
	Nov	154	Decay	2.96			
		155	Exposure	27.04	0.35%	20.24%	Regime C1
	Dec	156	Decay	2.21			
		157	Exposure	28.79	0.38%	20.63%	Regime C1
1962	Jan	158	Decay	4.40			
		159	Exposure	26.60	0.37%	20.99%	Regime C1
	Feb	160	Decay	0.01			
		161	Exposure	28.00	0.39%	21.38%	Regime C1
	Mar	162	Decay	6.23			
		163	Exposure	24.77	0.33%	21.72%	Regime C1
	Apr	164	Decay	3.92			
		165	Exposure	26.08	0.34%	22.06%	Regime C1
	May	166	Decay	1.28			
		167	Exposure	29.72	0.39%	22.45%	Regime C1
	Jun	168	Decay	6.35			
		169	Exposure	23.65	0.28%	22.73%	Regime C1
	Jul	170	Decay	2.88			
		171	Exposure	28.12	0.34%	23.07%	Regime C1
	Aug	172	Decay	14.02			
		173	Exposure	16.98	0.19%	23.26%	Regime C1
	Sep	174	Decay	0.01			
		175	Exposure	30.00	0.38%	23.63%	Regime C1
	Oct	176	Decay	5.21			
		177	Exposure	25.79	0.32%	23.95%	Regime C2
	Nov	178	Decay	1.07			
		179	Exposure	28.93	0.38%	24.33%	Regime C2
	Dec	180	Decay	0.01			
		181	Exposure	31.00	0.43%	24.76%	Regime C2
1963	Jan	182	Decay	4.63			
		183	Exposure	26.37	0.35%	25.11%	Regime C2
	Feb	184	Decay	0.01			
		185	Exposure	28.00	0.41%	25.52%	Regime C1
	Mar	186	Decay	5.84			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		187	Exposure	25.16	0.35%	25.86%	Regime C1
	Apr	188	Decay	2.10			
		189	Exposure	27.90	0.35%	26.21%	Regime C1
	May	190	Decay	30.35			
		191	Exposure	0.65	0.00%	26.21%	Regime C1
	Jun	192	Decay	4.50			
		193	Exposure	25.50	0.28%	26.50%	Regime C1
	Jul	194	Decay	0.01			
		195	Exposure	31.00	0.39%	26.88%	Regime C1
	Aug	196	Decay	5.00			
		197	Exposure	26.00	0.31%	27.19%	Regime C1
	Sep	198	Decay	1.91			
		199	Exposure	28.09	0.35%	27.54%	Regime C1
	Oct	200	Decay	8.20			
		201	Exposure	22.80	0.28%	27.82%	Regime C1
	Nov	202	Decay	1.20			
		203	Exposure	28.80	0.39%	28.21%	Regime C1
	Dec	204	Decay	21.96			
		205	Exposure	9.04	0.13%	28.34%	Regime C1
1964	Feb	206	Decay	43.55			
		207	Exposure	16.45	0.21%	28.54%	Regime C1
	Mar	208	Decay	3.43			
		209	Exposure	27.57	0.38%	28.92%	Regime C1
	Apr	210	Decay	11.23			
		211	Exposure	18.77	0.27%	29.20%	Regime C1
	May	212	Decay	3.88			
		213	Exposure	27.12	0.25%	29.45%	Regime C3
	Jun	214	Decay	12.01			
		215	Exposure	17.99	0.19%	29.64%	Regime C3
	Jul	216	Decay	7.34			
		217	Exposure	23.66	0.26%	29.89%	Regime C3
	Aug	218	Decay	8.93			
		219	Exposure	22.07	0.24%	30.14%	Regime C3
	Sep	220	Decay	7.00			
		221	Exposure	23.00	0.27%	30.40%	Regime C3
	Oct	222	Decay	4.85			
		223	Exposure	26.15	0.29%	30.69%	Regime C3
	Nov	224	Decay	8.65			
		225	Exposure	21.35	0.23%	30.92%	Regime C3
	Dec	226	Decay	17.70			
		227	Exposure	13.30	0.13%	31.05%	Regime C3
1965	Feb	228	Decay	42.24			
		229	Exposure	16.76	0.04%	31.09%	Regime C7
	Mar	230	Decay	12.08			
		231	Exposure	18.92	0.06%	31.15%	Regime C7
	Apr	232	Decay	13.13			
		233	Exposure	16.87	0.06%	31.21%	Regime C7

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	May	234	Decay	20.82			
		235	Exposure	10.18	0.03%	31.24%	Regime C7
	Jun	236	Decay	6.98			
		237	Exposure	23.02	0.08%	31.32%	Regime C7
	Jul	238	Decay	7.39			
		239	Exposure	23.61	0.08%	31.40%	Regime C7
	Aug	240	Decay	8.29			
		241	Exposure	22.71	0.08%	31.48%	Regime C7
	Sep	242	Decay	6.37			
		243	Exposure	23.63	0.09%	31.56%	Regime C7
	Oct	244	Decay	9.38			
		245	Exposure	21.62	0.08%	31.64%	Regime C7
	Nov	246	Decay	6.35			
		247	Exposure	23.65	0.09%	31.73%	Regime C7
	Dec	248	Decay	9.11			
		249	Exposure	21.89	0.08%	31.81%	Regime C7
1966	Jan	250	Decay	7.41			
		251	Exposure	23.59	0.10%	31.91%	Regime C7
	Feb	252	Decay	22.62			
		253	Exposure	5.38	0.02%	31.93%	Regime C7
	Mar	254	Decay	7.17			
		255	Exposure	23.83	0.33%	32.26%	Regime C1
	Apr	256	Decay	5.20			
		257	Exposure	24.80	0.35%	32.60%	Regime C1
	May	258	Decay	1.58			
		259	Exposure	29.42	0.40%	33.01%	Regime C1
	Jun	260	Decay	3.69			
		261	Exposure	26.31	0.36%	33.37%	Regime C1
	Jul	262	Decay	2.40			
		263	Exposure	28.60	0.37%	33.74%	Regime C1
	Aug	264	Decay	4.80			
		265	Exposure	26.20	0.33%	34.07%	Regime C1
	Sep	266	Decay	7.18			
		267	Exposure	22.82	0.28%	34.35%	Regime C1
	Oct	268	Decay	1.14			
		269	Exposure	29.86	0.41%	34.76%	Regime C1
	Nov	270	Decay	9.28			
		271	Exposure	20.72	0.24%	34.99%	Regime C1
	Dec	272	Decay	6.03			
		273	Exposure	24.97	0.35%	35.35%	Regime C1
1967	Jan	274	Decay	2.08			
		275	Exposure	28.92	0.43%	35.77%	Regime C1
	Feb	276	Decay	2.80			
		277	Exposure	25.20	0.40%	36.17%	Regime C1
	Mar	278	Decay	10.06			
		279	Exposure	20.94	0.28%	36.45%	Regime C3
	Apr	280	Decay	1.88			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		281	Exposure	28.12	0.40%	36.85%	Regime C3
	May	282	Decay	0.35			
		283	Exposure	30.65	0.43%	37.27%	Regime C3
	Jun	284	Decay	0.01			
		285	Exposure	30.00	0.42%	37.69%	Regime C3
	Jul	286	Decay	0.01			
		287	Exposure	31.00	0.43%	38.12%	Regime C3
	Aug	288	Decay	2.64			
		289	Exposure	28.36	0.38%	38.50%	Regime C3
	Sep	290	Decay	2.01			
		291	Exposure	27.99	0.38%	38.88%	Regime C3
	Oct	292	Decay	5.28			
		293	Exposure	25.72	0.35%	39.23%	Regime C3
	Nov	294	Decay	0.01			
		295	Exposure	30.00	0.44%	39.67%	Regime C3
	Dec	296	Decay	0.01			
		297	Exposure	31.00	0.47%	40.15%	Regime C3
1968	Jan	298	Decay	4.78			
		299	Exposure	26.22	0.38%	40.53%	Regime C3
	Feb	300	Decay	0.01			
		301	Exposure	29.00	0.45%	40.98%	Regime C3
	Mar	302	Decay	9.07			
		303	Exposure	21.93	0.31%	41.30%	Regime C3
	Apr	304	Decay	4.51			
		305	Exposure	25.49	0.37%	41.66%	Regime C1
	May	306	Decay	0.01			
		307	Exposure	31.00	0.46%	42.12%	Regime C1
	Jun	308	Decay	19.99			
		309	Exposure	10.01	0.14%	42.26%	Regime C1
	Jul	310	Decay	2.95			
		311	Exposure	28.05	0.37%	42.63%	Regime C1
	Aug	312	Decay	0.01			
		313	Exposure	31.00	0.42%	43.05%	Regime C1
	Sep	314	Decay	28.67			
		315	Exposure	1.33	0.02%	43.06%	Regime C1
	Oct	316	Decay	30.17			
		317	Exposure	0.83	0.00%	43.07%	Regime C1
	Nov	318	Decay	1.77			
		319	Exposure	28.23	0.38%	43.45%	Regime C1
	Dec	320	Decay	2.52			
		321	Exposure	28.48	0.43%	43.88%	Regime C1
1969	Jan	322	Decay	6.28			
		323	Exposure	24.72	0.37%	44.25%	Regime C1
	Feb	324	Decay	8.33			
		325	Exposure	19.67	0.30%	44.55%	Regime C1
	Mar	326	Decay	21.94			
		327	Exposure	9.06	0.14%	44.69%	Regime C1

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Apr	328	Decay	5.79			
		329	Exposure	24.21	0.29%	44.98%	Regime C1
	May	330	Decay	0.01			
		331	Exposure	31.00	0.28%	45.25%	Regime C1
	Jun	332	Decay	1.18			
		333	Exposure	28.82	0.30%	45.55%	Regime C1
	Jul	334	Decay	9.11			
		335	Exposure	21.89	0.30%	45.85%	Regime C1
	Aug	336	Decay	0.98			
		337	Exposure	30.02	0.43%	46.28%	Regime C1
	Sep	338	Decay	8.45			
		339	Exposure	21.55	0.30%	46.58%	Regime C1
	Oct	340	Decay	0.01			
		341	Exposure	31.04	0.46%	47.04%	Regime C1
	Nov	342	Decay	7.50			
		343	Exposure	22.50	0.35%	47.39%	Regime C1
	Dec	344	Decay	19.69			
		345	Exposure	11.31	0.10%	47.49%	Regime C4
1970	Jan	346	Decay	0.01			
		347	Exposure	31.00	0.41%	47.90%	Regime C4
	Feb	348	Decay	2.78			
		349	Exposure	25.22	0.32%	48.21%	Regime C4
	Mar	350	Decay	9.17			
		351	Exposure	21.83	0.26%	48.47%	Regime C4
	Apr	352	Decay	1.20			
		353	Exposure	28.80	0.37%	48.85%	Regime C4
	May	354	Decay	7.02			
		355	Exposure	23.98	0.27%	49.11%	Regime C4
	Jun	356	Decay	2.13			
		357	Exposure	27.87	0.32%	49.44%	Regime C4
	Jul	358	Decay	4.22			
		359	Exposure	26.78	0.29%	49.73%	Regime C4
	Aug	360	Decay	5.76			
		361	Exposure	25.24	0.29%	50.02%	Regime C4
	Sep	362	Decay	4.88			
		363	Exposure	25.12	0.27%	50.29%	Regime C4
	Oct	364	Decay	5.11			
		365	Exposure	25.89	0.27%	50.57%	Regime C4
	Nov	366	Decay	18.25			
		367	Exposure	11.75	0.12%	50.69%	Regime C4
	Dec	368	Decay	6.68			
		369	Exposure	24.32	0.29%	50.98%	Regime C4
1971	Jan	370	Decay	7.48			
		371	Exposure	23.52	0.32%	51.30%	Regime C4
	Feb	372	Decay	0.01			
		373	Exposure	28.00	0.41%	51.71%	Regime C4
	Mar	374	Decay	5.00			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		375	Exposure	26.00	0.36%	52.07%	Regime C4
	Apr	376	Decay	1.33			
		377	Exposure	28.67	0.37%	52.44%	Regime C4
	May	378	Decay	8.94			
		379	Exposure	22.06	0.27%	52.71%	Regime C4
	Jun	380	Decay	0.01			
		381	Exposure	30.00	0.40%	53.11%	Regime C4
	Jul	382	Decay	8.34			
		383	Exposure	22.66	0.27%	53.38%	Regime C4
	Aug	384	Decay	2.18			
		385	Exposure	28.82	0.35%	53.73%	Regime C4
	Sep	386	Decay	2.61			
		387	Exposure	27.39	0.33%	54.06%	Regime C4
	Oct	388	Decay	0.22			
		389	Exposure	30.78	0.41%	54.47%	Regime C4
	Nov	390	Decay	16.18			
		391	Exposure	13.82	0.15%	54.61%	Regime C4
	Dec	392	Decay	0.01			
		393	Exposure	31.00	0.43%	55.04%	Regime C4
1972	Jan	394	Decay	5.11			
		395	Exposure	25.89	0.34%	55.39%	Regime C4
	Feb	396	Decay	0.01			
		397	Exposure	29.00	0.43%	55.82%	Regime C4
	Mar	398	Decay	4.33			
		399	Exposure	26.67	0.33%	56.14%	Regime C4
	Apr	400	Decay	8.34			
		401	Exposure	21.66	0.27%	56.41%	Regime C4
	May	402	Decay	0.78			
		403	Exposure	30.22	0.39%	56.80%	Regime C4
	Jun	404	Decay	5.46			
		405	Exposure	24.54	0.31%	57.11%	Regime C4
	Jul	406	Decay	0.01			
		407	Exposure	31.00	0.40%	57.51%	Regime C4
	Aug	408	Decay	4.35			
		409	Exposure	26.65	0.33%	57.84%	Regime C4
	Sep	410	Decay	2.98			
		411	Exposure	27.02	0.33%	58.17%	Regime C4
	Oct	412	Decay	12.20			
		413	Exposure	18.80	0.24%	58.40%	Regime C4
	Nov	414	Decay	0.81			
		415	Exposure	29.19	0.39%	58.79%	Regime C4
	Dec	416	Decay	3.69			
		417	Exposure	27.31	0.38%	59.18%	Regime C4
1973	Jan	418	Decay	0.01			
		419	Exposure	31.00	0.45%	59.62%	Regime C4
	Feb	420	Decay	3.55			
		421	Exposure	24.45	0.32%	59.94%	Regime C4

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Mar	422	Decay	0.12			
		423	Exposure	30.88	0.42%	60.36%	Regime C4
	Apr	424	Decay	8.44			
		425	Exposure	21.56	0.25%	60.61%	Regime C4
	May	426	Decay	0.95			
		427	Exposure	30.05	0.39%	60.99%	Regime C4
	Jun	428	Decay	5.12			
		429	Exposure	24.88	0.29%	61.29%	Regime C4
	Jul	430	Decay	1.59			
		431	Exposure	29.41	0.35%	61.64%	Regime C4
	Aug	432	Decay	5.20			
		433	Exposure	25.80	0.29%	61.92%	Regime C4
	Sep	434	Decay	0.01			
		435	Exposure	30.00	0.37%	62.29%	Regime C4
	Oct	436	Decay	16.06			
		437	Exposure	14.94	0.18%	62.47%	Regime C4
	Nov	438	Decay	0.01			
		439	Exposure	30.00	0.38%	62.84%	Regime C4
	Dec	440	Decay	4.48			
		441	Exposure	26.52	0.34%	63.19%	Regime C4
1974	Jan	442	Decay	4.70			
		443	Exposure	26.30	0.34%	63.53%	Regime C4
	Feb	444	Decay	4.94			
		445	Exposure	23.06	0.31%	63.84%	Regime C4
	Mar	446	Decay	0.01			
		447	Exposure	31.00	0.41%	64.26%	Regime C4
	Apr	448	Decay	3.87			
		449	Exposure	26.13	0.35%	64.61%	Regime C4
	May	450	Decay	0.01			
		451	Exposure	31.00	0.38%	64.99%	Regime C4
	Jun	452	Decay	11.49			
		453	Exposure	18.51	0.23%	65.22%	Regime C4
	Jul	454	Decay	27.09			
		455	Exposure	3.91	0.03%	65.25%	Regime C4
	Aug	456	Decay	0.01			
		457	Exposure	31.00	0.30%	65.55%	Regime C4
	Sep	458	Decay	0.75			
		459	Exposure	29.25	0.29%	65.84%	Regime C4
	Oct	460	Decay	20.00			
		461	Exposure	11.00	0.09%	65.93%	Regime C4
	Nov	462	Decay	2.32			
		463	Exposure	27.68	0.26%	66.19%	Regime C4
	Dec	464	Decay	1.13			
		465	Exposure	29.87	0.34%	66.53%	Regime C4
1975	Jan	466	Decay	21.95			
		467	Exposure	9.05	0.07%	66.60%	Regime C4
	Feb	468	Decay	0.01			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		469	Exposure	28.00	0.32%	66.91%	Regime C4
	Mar	470	Decay	5.83			
		471	Exposure	25.17	0.31%	67.22%	Regime C4
	Apr	472	Decay	6.01			
		473	Exposure	23.99	0.30%	67.52%	Regime C4
	May	474	Decay	1.55			
		475	Exposure	29.45	0.38%	67.89%	Regime C4
	Jun	476	Decay	25.22			
		477	Exposure	4.78	0.06%	67.96%	Regime C4
	Aug	478	Decay	33.06			
		479	Exposure	28.94	0.29%	68.25%	Regime C4
	Sep	480	Decay	1.84			
		481	Exposure	28.16	0.33%	68.57%	Regime C4
	Oct	482	Decay	10.21			
		483	Exposure	20.79	0.22%	68.80%	Regime C4
	Nov	484	Decay	0.01			
		485	Exposure	30.00	0.36%	69.15%	Regime C4
	Dec	486	Decay	5.44			
		487	Exposure	25.56	0.30%	69.45%	Regime C4
1976	Jan	488	Decay	0.01			
		489	Exposure	31.00	0.38%	69.83%	Regime C4
	Feb	490	Decay	2.57			
		491	Exposure	26.43	0.31%	70.14%	Regime C4
	Mar	492	Decay	6.05			
		493	Exposure	24.95	0.27%	70.41%	Regime C4
	Apr	494	Decay	5.39			
		495	Exposure	24.61	0.31%	70.73%	Regime C4
	May	496	Decay	13.53			
		497	Exposure	17.47	0.17%	70.90%	Regime C4
	Jun	498	Decay	5.32			
		499	Exposure	24.68	0.28%	71.18%	Regime C4
	Jul	500	Decay	6.73			
		501	Exposure	24.27	0.28%	71.46%	Regime C4
	Aug	502	Decay	6.70			
		503	Exposure	24.30	0.25%	71.71%	Regime C4
	Sep	504	Decay	0.01			
		505	Exposure	30.00	0.36%	72.07%	Regime C4
	Oct	506	Decay	7.19			
		507	Exposure	23.81	0.24%	72.31%	Regime C4
	Nov	508	Decay	13.30			
		509	Exposure	16.70	0.18%	72.49%	Regime C4
	Dec	510	Decay	9.67			
		511	Exposure	21.33	0.24%	72.72%	Regime C4
1977	Jan	512	Decay	1.74			
		513	Exposure	29.26	0.36%	73.08%	Regime C4
	Feb	514	Decay	2.53			
		515	Exposure	25.47	0.32%	73.40%	Regime C4

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Apr	516	Decay	46.56			
		517	Exposure	14.44	0.13%	73.53%	Regime C4
	May	518	Decay	0.01			
		519	Exposure	31.00	0.36%	73.89%	Regime C4
	Jun	520	Decay	10.12			
		521	Exposure	19.88	0.22%	74.11%	Regime C4
	Jul	522	Decay	0.01			
		523	Exposure	31.00	0.33%	74.44%	Regime C4
	Aug	524	Decay	7.74			
		525	Exposure	23.26	0.23%	74.67%	Regime C4
	Sep	526	Decay	8.87			
		527	Exposure	21.13	0.22%	74.89%	Regime C4
	Oct	528	Decay	2.17			
		529	Exposure	28.83	0.32%	75.21%	Regime C4
	Nov	530	Decay	3.33			
		531	Exposure	26.67	0.35%	75.56%	Regime C4
	Dec	532	Decay	3.67			
		533	Exposure	27.33	0.30%	75.87%	Regime C4
1978	Jan	534	Decay	7.13			
		535	Exposure	23.87	0.27%	76.14%	Regime C4
	Jun	536	Decay	145.39			
		537	Exposure	4.61	0.02%	76.16%	Regime C4
	Jul	538	Decay	1.17			
		539	Exposure	29.83	0.32%	76.48%	Regime C4
	Aug	540	Decay	8.78			
		541	Exposure	22.22	0.26%	76.74%	Regime C4
	Sep	542	Decay	8.53			
		543	Exposure	21.47	0.24%	76.97%	Regime C4
	Oct	544	Decay	1.30			
		545	Exposure	29.70	0.35%	77.32%	Regime C4
	Nov	546	Decay	5.04			
		547	Exposure	24.96	0.32%	77.64%	Regime C4
	Dec	548	Decay	6.25			
		549	Exposure	24.75	0.29%	77.93%	Regime C4
1979	Jan	550	Decay	0.98			
		551	Exposure	30.02	0.42%	78.35%	Regime C4
	Feb	552	Decay	14.52			
		553	Exposure	13.48	0.15%	78.50%	Regime C4
	Mar	554	Decay	1.85			
		555	Exposure	29.15	0.35%	78.85%	Regime C4
	Apr	556	Decay	27.17			
		557	Exposure	2.83	0.03%	78.88%	Regime C4
	Aug	558	Decay	115.52			
		559	Exposure	7.48	0.06%	78.94%	Regime C4
	Sep	560	Decay	0.66			
		561	Exposure	29.34	0.31%	79.26%	Regime C4
	Oct	562	Decay	3.36			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		563	Exposure	27.64	0.31%	79.57%	Regime C4
	Nov	564	Decay	12.73			
		565	Exposure	17.27	0.19%	79.76%	Regime C4
	Dec	566	Decay	6.64			
		567	Exposure	24.36	0.30%	80.06%	Regime C4
1980	Jan	568	Decay	5.39			
		569	Exposure	25.61	0.34%	80.40%	Regime C4
	Feb	570	Decay	9.55			
		571	Exposure	19.45	0.20%	80.61%	Regime C4
	Mar	572	Decay	0.01			
		573	Exposure	31.00	0.42%	81.03%	Regime C4
	Apr	574	Decay	9.91			
		575	Exposure	20.09	0.23%	81.26%	Regime C4
	May	576	Decay	1.66			
		577	Exposure	29.34	0.33%	81.59%	Regime C4
	Jun	578	Decay	7.40			
		579	Exposure	22.60	0.25%	81.83%	Regime C4
	Jul	580	Decay	0.89			
		581	Exposure	30.11	0.29%	82.13%	Regime C4
	Aug	582	Decay	19.22			
		583	Exposure	11.78	0.12%	82.24%	Regime C4
	Nov	584	Decay	88.07			
		585	Exposure	2.93	0.02%	82.26%	Regime C4
	Dec	586	Decay	2.37			
		587	Exposure	28.63	0.37%	82.63%	Regime C4
1981	Jan	588	Decay	6.85			
		589	Exposure	24.15	0.33%	82.96%	Regime C4
	Feb	590	Decay	4.07			
		591	Exposure	23.93	0.31%	83.27%	Regime C4
	Mar	592	Decay	0.01			
		593	Exposure	31.00	0.44%	83.71%	Regime C4
	Apr	594	Decay	7.52			
		595	Exposure	22.48	0.27%	83.98%	Regime C4
	May	596	Decay	17.35			
		597	Exposure	13.65	0.18%	84.16%	Regime C4
	Jun	598	Decay	27.62			
		599	Exposure	2.38	0.01%	84.17%	Regime C4
	Jul	600	Decay	2.33			
		601	Exposure	28.67	0.30%	84.48%	Regime C4
	Aug	602	Decay	16.83			
		603	Exposure	14.17	0.12%	84.60%	Regime C4
	Sep	604	Decay	5.20			
		605	Exposure	24.80	0.28%	84.88%	Regime C4
	Oct	606	Decay	2.90			
		607	Exposure	28.10	0.32%	85.20%	Regime C4
	Nov	608	Decay	10.39			
		609	Exposure	19.61	0.23%	85.43%	Regime C4

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
	Dec	610	Decay	8.35			
		611	Exposure	22.65	0.28%	85.71%	Regime C4
1982	Jan	612	Decay	8.72			
		613	Exposure	22.28	0.30%	86.02%	Regime C4
	Feb	614	Decay	5.06			
		615	Exposure	22.94	0.29%	86.30%	Regime C4
	Mar	616	Decay	9.90			
		617	Exposure	21.10	0.25%	86.55%	Regime C4
	Apr	618	Decay	7.00			
		619	Exposure	23.00	0.30%	86.85%	Regime C4
	May	620	Decay	6.47			
		621	Exposure	24.53	0.30%	87.15%	Regime C4
	Jun	622	Decay	0.01			
		623	Exposure	30.00	0.37%	87.52%	Regime C4
	Jul	624	Decay	4.64			
		625	Exposure	26.36	0.30%	87.82%	Regime C4
	Aug	626	Decay	2.37			
		627	Exposure	28.63	0.35%	88.17%	Regime C4
	Sep	628	Decay	3.92			
		629	Exposure	26.08	0.31%	88.48%	Regime C4
	Oct	630	Decay	7.42			
		631	Exposure	23.58	0.27%	88.75%	Regime C4
	Dec	632	Decay	35.44			
		633	Exposure	25.56	0.35%	89.11%	Regime C5
1983	Jan	634	Decay	1.73			
		635	Exposure	29.27	0.43%	89.54%	Regime C5
	Feb	636	Decay	0.16			
		637	Exposure	27.84	0.43%	89.96%	Regime C5
	Mar	638	Decay	5.37			
		639	Exposure	25.63	0.35%	90.31%	Regime C5
	Apr	640	Decay	0.04			
		641	Exposure	29.96	0.44%	90.75%	Regime C5
	May	642	Decay	0.01			
		643	Exposure	31.00	0.42%	91.17%	Regime C5
	Jun	644	Decay	11.71			
		645	Exposure	18.29	0.25%	91.42%	Regime C5
	Jul	646	Decay	5.73			
		647	Exposure	25.27	0.30%	91.72%	Regime C5
	Aug	648	Decay	4.75			
		649	Exposure	26.25	0.34%	92.06%	Regime C5
	Sep	650	Decay	0.01			
		651	Exposure	30.00	0.41%	92.47%	Regime C5
	Oct	652	Decay	8.83			
		653	Exposure	22.17	0.30%	92.77%	Regime C5
	Nov	654	Decay	0.01			
		655	Exposure	30.00	0.45%	93.22%	Regime C5
	Dec	656	Decay	0.01			

Year	Month	Cycle #	Cycle Type	Days in Cycle	Percent Total Fluence	Cumulative Fluence	Regime #
		657	Exposure	31.00	0.48%	93.70%	Regime C5
1984	Jan	658	Decay	0.01			
		659	Exposure	31.00	0.48%	94.18%	Regime C5
	Feb	660	Decay	26.71			
		661	Exposure	2.29	0.03%	94.21%	Regime C5
	Mar	662	Decay	26.27			
		663	Exposure	4.73	0.05%	94.26%	Regime C5
	Apr	664	Decay	0.04			
		665	Exposure	29.96	0.45%	94.71%	Regime C5
	May	666	Decay	0.01			
		667	Exposure	31.00	0.45%	95.16%	Regime C5
	Jun	668	Decay	0.01			
		669	Exposure	30.00	0.42%	95.58%	Regime C5
	Jul	670	Decay	0.01			
		671	Exposure	31.00	0.42%	96.00%	Regime C5
	Aug	672	Decay	1.30			
		673	Exposure	29.70	0.39%	96.39%	Regime C5
	Sep	674	Decay	0.01			
		675	Exposure	30.00	0.40%	96.80%	Regime C5
	Oct	676	Decay	24.08			
		677	Exposure	6.92	0.06%	96.86%	Regime C6
	Nov	678	Decay	4.43			
		679	Exposure	25.57	0.35%	97.21%	Regime C6
	Dec	680	Decay	0.65			
		681	Exposure	30.35	0.44%	97.65%	Regime C6
1985	Jan	682	Decay	0.01			
		683	Exposure	31.00	0.48%	98.14%	Regime C6
	Feb	684	Decay	1.87			
		685	Exposure	26.13	0.39%	98.53%	Regime C6
	Mar	686	Decay	6.17			
		687	Exposure	24.83	0.36%	98.89%	Regime C6
	Apr	688	Decay	0.04			
		689	Exposure	29.96	0.44%	99.33%	Regime C6
	May	690	Decay	2.10			
		691	Exposure	28.90	0.40%	99.73%	Regime C6
	Jun	692	Decay	9.97			
		693	Exposure	20.03	0.27%	100.00%	Regime C6
Final Decay Through December 31, 2009		694	Decay	8990.98			

Table 21 Calculated Fluence by Material Region for K-Reactor Regime 1

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	7.315E+18	6.097E+18	3.348E+17
Tank Surface Deposits	1.199E+19	8.665E+18	4.253E+17
Internals	1.477E+20	1.378E+20	1.337E+19
Surface Deposits on Internals	1.477E+20	1.378E+20	1.337E+19
1H1V	4.184E+09	4.892E+09	—
2H1V	1.899E+10	2.066E+10	8.079E+08
3H1V	2.733E+12	9.909E+12	4.585E+11
4H1V	1.609E+14	9.404E+14	3.441E+13
5H1V	8.156E+12	3.934E+13	4.244E+12
1H2V	1.099E+09	6.422E+09	—
2H2V	1.738E+09	7.059E+09	1.235E+09
3H2V	1.086E+16	1.438E+16	1.669E+15
4H2V	3.831E+17	3.232E+17	4.076E+16
5H2V	8.773E+14	1.024E+15	2.680E+14
1H3V	—	4.357E+08	—
2H3V	4.316E+09	4.015E+10	7.969E+09
3H3V	1.952E+17	1.220E+17	8.594E+15
5H3V	1.073E+17	4.155E+16	4.647E+15

Table 22 Calculated Fluence by Material Region for K-Reactor Regime 3

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	3.333E+18	1.821E+18	7.426E+16
Tank Surface Deposits	5.468E+18	2.469E+18	8.347E+16
Internals	8.778E+19	1.511E+20	1.851E+19
Surface Deposits on Internals	8.778E+19	1.511E+20	1.851E+19
1H1V	3.293E+08	8.612E+08	—
2H1V	6.963E+09	5.655E+09	1.158E+08
3H1V	5.831E+11	2.244E+12	1.226E+11
4H1V	5.658E+13	2.021E+14	8.039E+12
5H1V	2.200E+11	9.882E+11	8.912E+10
1H2V	—	5.056E+09	3.292E+09
2H2V	—	4.682E+09	1.534E+10
3H2V	2.921E+15	2.408E+15	2.962E+14
4H2V	1.175E+17	6.062E+16	7.582E+15
5H2V	9.989E+13	1.945E+13	5.889E+12
1H3V	1.159E+09	9.999E+08	—
2H3V	7.385E+09	9.163E+10	9.795E+09
3H3V	1.455E+17	8.362E+16	6.131E+15
5H3V	2.476E+16	4.138E+14	7.818E+13

Table 23 Calculated Fluence by Material Region for K-Reactor Regime 4

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.058E+19	1.029E+19	6.231E+17
Tank Surface Deposits	1.927E+19	1.628E+19	8.689E+17
Internals	1.186E+20	1.399E+20	2.318E+19
Surface Deposits on Internals	1.186E+20	1.399E+20	2.318E+19
1H1V	7.184E+09	7.692E+09	9.040E+07
2H1V	3.551E+10	4.330E+10	1.002E+09
3H1V	4.803E+12	1.652E+13	6.263E+11
4H1V	3.699E+14	2.127E+15	7.414E+13
5H1V	6.048E+12	2.735E+13	2.547E+12
1H2V	2.422E+08	2.680E+09	9.510E+08
2H2V	1.537E+10	1.407E+10	1.780E+09
3H2V	1.112E+16	1.523E+16	1.737E+15
4H2V	8.510E+17	7.336E+17	9.141E+16
5H2V	6.979E+14	7.801E+14	1.741E+14
1H3V	9.868E+08	3.359E+09	—
2H3V	4.181E+09	2.183E+10	1.993E+09
3H3V	8.079E+16	1.329E+16	9.662E+14
5H3V	2.958E+16	3.215E+15	4.234E+14

Table 24 Calculated Fluence by Material Region for K-Reactor Regime 7

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	4.754E+18	2.329E+18	9.777E+16
Tank Surface Deposits	8.777E+18	3.512E+18	1.251E+17
Internals	1.343E+20	9.820E+19	4.728E+18
Surface Deposits on Internals	1.343E+20	9.820E+19	4.728E+18
1H1V	1.332E+09	4.034E+09	—
2H1V	6.525E+09	2.757E+10	—
3H1V	9.083E+11	3.352E+12	1.780E+11
4H1V	1.259E+14	3.749E+14	1.448E+13
5H1V	2.713E+11	1.249E+12	9.930E+10
1H2V	2.325E+09	1.616E+09	1.043E+08
2H2V	1.878E+09	3.722E+10	1.939E+09
3H2V	4.014E+15	2.754E+15	3.558E+14
4H2V	2.375E+17	1.065E+17	1.349E+16
5H2V	5.367E+13	1.592E+13	5.019E+12
1H3V	2.320E+09	6.743E+09	5.040E+08
2H3V	3.688E+10	1.194E+11	1.932E+10
3H3V	1.065E+17	5.433E+16	3.575E+15
5H3V	9.930E+15	1.997E+14	3.788E+13

Table 25 Calculated Fluence by Material Region for K-Reactor Regime 8

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.765E+18	5.881E+17	2.426E+16
Tank Surface Deposits	3.068E+18	6.652E+17	2.382E+16
Internals	9.172E+19	1.593E+20	1.867E+19
Surface Deposits on Internals	9.172E+19	1.593E+20	1.867E+19
1H1V	2.323E+08	1.031E+09	—
2H1V	1.168E+09	4.047E+09	1.795E+08
3H1V	1.288E+11	5.152E+11	3.026E+10
4H1V	2.723E+13	3.277E+13	1.681E+12
5H1V	3.883E+10	2.185E+11	3.009E+10
1H2V	7.905E+08	1.340E+09	—
2H2V	1.487E+09	8.248E+09	—
3H2V	9.780E+14	3.682E+14	6.040E+13
4H2V	4.385E+16	9.961E+15	1.614E+15
5H2V	2.699E+13	4.362E+12	1.592E+12
1H3V	1.540E+09	5.395E+09	2.351E+08
2H3V	3.060E+10	1.079E+11	1.499E+10
3H3V	1.078E+17	5.115E+16	3.331E+15
5H3V	8.802E+15	1.604E+14	3.484E+13

Table 26 Calculated Fluence by Material Region for K-Reactor Regime 9

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	3.469E+18	1.486E+18	6.153E+16
Tank Surface Deposits	6.107E+18	2.376E+18	8.233E+16
Internals	1.469E+20	1.666E+20	2.770E+19
Surface Deposits on Internals	1.469E+20	1.666E+20	2.770E+19
1H1V	4.117E+08	2.713E+08	—
2H1V	1.841E+09	2.837E+09	—
3H1V	5.648E+11	2.062E+12	7.306E+10
4H1V	7.870E+13	2.785E+14	1.178E+13
5H1V	4.734E+11	2.456E+12	2.531E+11
1H2V	2.773E+08	2.586E+08	—
2H2V	1.714E+09	6.979E+09	—
3H2V	2.919E+15	7.065E+14	9.929E+13
4H2V	1.469E+17	7.863E+16	9.586E+15
5H2V	7.544E+13	3.748E+13	1.295E+13
1H3V	4.432E+08	2.088E+09	2.742E+08
2H3V	1.112E+10	2.770E+10	3.073E+09
3H3V	8.229E+16	8.111E+15	6.724E+14
5H3V	3.041E+16	2.018E+15	3.047E+14

Table 27 Calculated Fluence by Material Region for K-Reactor Regime 10

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	5.344E+18	1.081E+18	4.699E+16
Tank Surface Deposits	9.626E+18	1.722E+18	6.410E+16
Internals	—	—	—
Surface Deposits on Internals	—	—	—
1H1V	4.958E+08	—	—
2H1V	3.537E+09	—	—
3H1V	2.253E+11	8.335E+11	3.507E+10
4H1V	7.801E+13	1.147E+14	5.337E+12
5H1V	4.933E+11	2.619E+12	3.100E+11
1H2V	—	—	—
2H2V	—	—	—
3H2V	2.156E+15	3.182E+14	5.022E+13
4H2V	1.665E+17	5.583E+16	7.304E+15
5H2V	1.458E+14	5.534E+13	1.553E+13
1H3V	5.932E+08	9.860E+08	7.343E+07
2H3V	7.493E+09	3.018E+10	4.059E+09
3H3V	1.020E+17	4.493E+15	3.883E+14
5H3V	5.778E+16	3.290E+15	4.807E+14

Table 28 Calculated Fluence by Material Region for K-Reactor Regime 11

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	8.395E+18	5.029E+18	2.861E+17
Tank Surface Deposits	1.538E+19	8.001E+18	3.993E+17
Internals	—	—	—
Surface Deposits on Internals	—	—	—
1H1V	3.267E+09	2.228E+09	—
2H1V	1.821E+10	2.226E+10	—
3H1V	1.757E+12	6.123E+12	2.137E+11
4H1V	2.289E+14	9.621E+14	3.489E+13
5H1V	4.787E+12	2.224E+13	2.324E+12
1H2V	—	—	—
2H2V	7.638E+07	—	—
3H2V	4.409E+15	3.910E+15	4.639E+14
4H2V	4.905E+17	3.444E+17	4.278E+16
5H2V	5.599E+14	6.035E+14	1.476E+14
1H3V	1.357E+08	—	—
2H3V	2.926E+09	1.503E+10	6.205E+08
3H3V	7.228E+16	3.721E+15	3.114E+14
5H3V	5.165E+16	3.384E+15	4.909E+14

Table 29 Calculated Fluence by Material Region for K-Reactor Curium-II

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	6.175E+18	7.549E+15	5.283E+14
Tank Surface Deposits	1.165E+19	7.948E+15	4.153E+14
Internals	—	—	—
Surface Deposits on Internals	—	—	—
1H1V	—	—	—
2H1V	—	—	—
3H1V	—	—	—
4H1V	7.817E+13	1.424E+11	3.988E+09
5H1V	1.918E+09	3.028E+09	—
1H2V	—	—	—
2H2V	—	—	—
3H2V	1.953E+15	—	—
4H2V	1.461E+17	6.718E+13	1.548E+13
5H2V	1.267E+14	1.827E+10	1.427E+09
1H3V	—	—	—
2H3V	1.489E+08	—	—
3H3V	6.316E+16	3.085E+13	3.047E+12
5H3V	6.237E+16	5.898E+14	1.128E+14

Table 30 Calculated Fluence by Material Region for K-Reactor Californium-I

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	6.946E+18	2.625E+13	4.409E+12
Tank Surface Deposits	1.349E+19	3.155E+13	1.749E+12
Internals	—	—	—
Surface Deposits on Internals	—	—	—
1H1V	—	—	—
2H1V	—	—	—
3H1V	—	—	—
4H1V	1.012E+14	—	—
5H1V	—	—	—
1H2V	—	—	—
2H2V	—	—	—
3H2V	5.560E+14	—	—
4H2V	1.908E+17	2.290E+11	—
5H2V	1.585E+14	—	—
1H3V	—	—	—
2H3V	—	—	—
3H3V	1.018E+16	4.421E+07	—
5H3V	5.901E+16	3.525E+12	1.544E+12

Table 31 Calculated Fluence by Material Region for L-Reactor Regime 1

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	3.223E+21	2.686E+21	1.475E+20
Tank Surface Deposits	5.282E+21	3.818E+21	1.874E+20
Internals	6.507E+22	6.071E+22	5.892E+21
Surface Deposits on Internals	6.507E+22	6.071E+22	5.892E+21
1H1V	1.844E+12	2.155E+12	—
2H1V	8.365E+12	9.101E+12	3.560E+11
3H1V	1.204E+15	4.366E+15	2.020E+14
4H1V	7.089E+16	4.143E+17	1.516E+16
5H1V	3.593E+15	1.733E+16	1.870E+15
1H2V	4.841E+11	2.829E+12	—
2H2V	7.659E+11	3.110E+12	5.441E+11
3H2V	4.785E+18	6.337E+18	7.354E+17
4H2V	1.688E+20	1.424E+20	1.796E+19
5H2V	3.865E+17	4.513E+17	1.181E+17
1H3V	1.901E+12	1.920E+11	—
2H3V	1.901E+12	1.769E+13	3.511E+12
3H3V	8.602E+19	5.374E+19	3.787E+18
5H3V	4.728E+19	1.830E+19	2.047E+18

Table 32 Calculated Fluence by Material Region for L-Reactor Regime 3

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.468E+21	8.022E+20	3.272E+19
Tank Surface Deposits	2.409E+21	1.088E+21	3.677E+19
Internals	3.808E+22	6.698E+22	8.297E+21
Surface Deposits on Internals	3.808E+22	6.698E+22	8.297E+21
1H1V	1.451E+11	3.794E+11	—
2H1V	3.068E+12	2.492E+12	5.101E+10
3H1V	2.569E+14	9.886E+14	5.400E+13
4H1V	2.493E+16	8.902E+16	3.542E+15
5H1V	9.692E+13	4.354E+14	3.927E+13
1H2V	3.254E+12	2.227E+12	1.451E+12
2H2V	3.254E+12	2.063E+12	6.759E+12
3H2V	1.287E+18	1.061E+18	1.305E+17
4H2V	5.178E+19	2.671E+19	3.340E+18
5H2V	4.401E+16	8.571E+15	2.595E+15
1H3V	5.106E+11	4.405E+11	—
2H3V	3.254E+12	4.037E+13	4.316E+12
3H3V	6.409E+19	3.684E+19	2.701E+18
5H3V	1.091E+19	1.823E+17	3.444E+16

Table 33 Calculated Fluence by Material Region for L-Reactor Regime 4

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	4.663E+21	4.534E+21	2.745E+20
Tank Surface Deposits	8.490E+21	7.174E+21	3.828E+20
Internals	5.224E+22	6.162E+22	1.021E+22
Surface Deposits on Internals	5.224E+22	6.162E+22	1.021E+22
1H1V	3.165E+12	3.389E+12	3.983E+10
2H1V	1.564E+13	1.908E+13	4.414E+11
3H1V	2.116E+15	7.277E+15	2.759E+14
4H1V	1.630E+17	9.373E+17	3.267E+16
5H1V	2.665E+15	1.205E+16	1.122E+15
1H2V	1.067E+11	1.181E+12	4.190E+11
2H2V	6.771E+12	6.198E+12	7.842E+11
3H2V	4.899E+18	6.709E+18	7.653E+17
4H2V	3.750E+20	3.232E+20	4.027E+19
5H2V	3.075E+17	3.437E+17	7.671E+16
1H3V	4.348E+11	1.480E+12	—
2H3V	1.842E+12	9.620E+12	8.783E+11
3H3V	3.560E+19	5.854E+18	4.257E+17
5H3V	1.303E+19	1.417E+18	1.865E+17

Table 34 Calculated Fluence by Material Region for L-Reactor Regime 6

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	2.708E+21	2.003E+21	1.096E+20
Tank Surface Deposits	4.970E+21	3.094E+21	1.476E+20
Internals	8.258E+21	6.014E+21	2.892E+20
Surface Deposits on Internals	8.258E+21	6.014E+21	2.892E+20
1H1V	2.067E+12	2.215E+12	—
2H1V	9.083E+12	1.645E+13	5.461E+10
3H1V	9.800E+14	3.492E+15	1.548E+14
4H1V	8.607E+16	3.748E+17	1.403E+16
5H1V	2.408E+14	1.033E+15	6.782E+13
1H2V	1.681E+12	7.377E+12	8.188E+11
2H2V	4.144E+11	1.074E+13	1.032E+12
3H2V	3.215E+18	3.815E+18	4.688E+17
4H2V	1.769E+20	1.203E+20	1.564E+19
5H2V	3.413E+16	1.751E+16	3.450E+15
1H3V	6.642E+11	2.631E+12	2.041E+11
2H3V	1.543E+13	4.254E+13	6.825E+12
3H3V	4.637E+19	2.450E+19	1.617E+18
5H3V	4.319E+18	9.599E+16	1.991E+16

Table 35 Calculated Fluence by Material Region for L-Reactor Regime 7

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	2.095E+21	1.026E+21	4.308E+19
Tank Surface Deposits	3.867E+21	1.547E+21	5.512E+19
Internals	8.797E+21	6.433E+21	3.097E+20
Surface Deposits on Internals	8.797E+21	6.433E+21	3.097E+20
1H1V	5.868E+11	1.777E+12	—
2H1V	2.875E+12	1.214E+13	—
3H1V	4.002E+14	1.477E+15	7.844E+13
4H1V	5.546E+16	1.652E+17	6.381E+15
5H1V	1.195E+14	5.502E+14	4.375E+13
1H2V	1.024E+12	7.119E+11	4.597E+10
2H2V	8.274E+11	1.640E+13	8.545E+11
3H2V	1.769E+18	1.214E+18	1.567E+17
4H2V	1.046E+20	4.692E+19	5.944E+18
5H2V	2.364E+16	7.013E+15	2.211E+15
1H3V	1.022E+12	2.971E+12	2.221E+11
2H3V	1.625E+13	5.260E+13	8.512E+12
3H3V	4.693E+19	2.394E+19	1.575E+18
5H3V	4.375E+18	8.797E+16	1.669E+16

Table 36 Calculated Fluence by Material Region for L-Reactor Regime 9

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.529E+21	6.549E+20	2.711E+19
Tank Surface Deposits	2.691E+21	1.047E+21	3.627E+19
Internals	6.471E+22	7.340E+22	1.221E+22
Surface Deposits on Internals	6.471E+22	7.340E+22	1.221E+22
1H1V	1.814E+11	1.195E+11	—
2H1V	8.111E+11	1.250E+12	—
3H1V	2.489E+14	9.084E+14	3.219E+13
4H1V	3.467E+16	1.227E+17	5.192E+15
5H1V	2.086E+14	1.082E+15	1.115E+14
1H2V	1.222E+11	1.139E+11	—
2H2V	7.553E+11	3.075E+12	—
3H2V	1.286E+18	3.113E+17	4.375E+16
4H2V	6.470E+19	3.464E+19	4.224E+18
5H2V	3.324E+16	1.651E+16	5.706E+15
1H3V	1.953E+11	9.201E+11	1.208E+11
2H3V	4.899E+12	1.220E+13	1.354E+12
3H3V	3.626E+19	3.574E+18	2.963E+17
5H3V	1.340E+19	8.893E+17	1.342E+17

Table 37 Calculated Fluence by Material Region for C-Reactor Regime C1

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.586E+19	4.125E+18	1.645E+17
Tank Surface Deposits	3.521E+19	4.403E+18	1.511E+17
Internals	4.129E+20	2.234E+20	9.819E+18
Surface Deposits on Internals	4.129E+20	2.234E+20	9.819E+18
1H1V	2.195E+11	2.065E+11	6.174E+09
2H1V	5.947E+11	8.423E+11	2.036E+10
3H1V	1.004E+12	5.215E+12	2.566E+11
4H1V	1.072E+15	8.183E+13	5.563E+12
5H1V	1.607E+12	4.943E+12	4.781E+11
1H2V	2.752E+11	5.992E+11	2.072E+10
2H2V	6.028E+11	5.917E+12	2.248E+11
3H2V	3.458E+12	3.993E+13	7.211E+12
4H2V	3.978E+17	1.728E+16	2.700E+15
5H2V	7.526E+12	3.944E+13	1.466E+13
1H3V	1.874E+10	4.496E+10	9.552E+08
2H3V	8.623E+10	5.868E+11	2.074E+10
3H3V	1.344E+17	7.000E+16	4.982E+15
5H3V	3.645E+17	2.049E+17	2.061E+16

Table 38 Calculated Fluence by Material Region for C-Reactor Regime C2

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.768E+19	5.417E+17	2.646E+16
Tank Surface Deposits	4.246E+19	8.758E+17	3.618E+16
Internals	3.001E+20	2.241E+20	1.110E+19
Surface Deposits on Internals	3.001E+20	2.241E+20	1.110E+19
1H1V	4.685E+10	1.898E+10	1.160E+09
2H1V	8.951E+10	1.671E+11	2.547E+09
3H1V	4.533E+11	1.329E+12	4.594E+10
4H1V	1.773E+15	1.753E+14	9.632E+12
5H1V	4.580E+11	8.974E+11	7.354E+10
1H2V	1.460E+11	3.043E+11	2.091E+09
2H2V	6.517E+10	1.213E+12	4.341E+10
3H2V	9.119E+11	8.978E+12	1.534E+12
4H2V	6.271E+17	2.623E+16	4.228E+15
5H2V	1.500E+12	4.899E+12	2.118E+12
1H3V	5.730E+09	1.282E+10	1.911E+08
2H3V	7.022E+09	7.649E+10	5.592E+09
3H3V	2.614E+16	3.424E+15	3.746E+14
5H3V	1.061E+17	9.734E+15	1.323E+15

Table 39 Calculated Fluence by Material Region for C-Reactor Regime C3

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.299E+19	1.729E+18	6.915E+16
Tank Surface Deposits	3.103E+19	1.905E+18	6.861E+16
Internals	2.234E+20	2.157E+20	1.050E+19
Surface Deposits on Internals	2.234E+20	2.157E+20	1.050E+19
1H1V	1.655E+11	2.832E+11	4.922E+08
2H1V	5.859E+11	8.789E+11	1.458E+10
3H1V	1.097E+12	5.544E+12	1.890E+11
4H1V	1.389E+15	1.647E+14	9.499E+12
5H1V	3.331E+11	5.313E+11	1.778E+10
1H2V	3.191E+11	1.051E+12	2.038E+09
2H2V	5.556E+11	7.593E+12	4.065E+10
3H2V	3.399E+12	4.256E+13	7.416E+12
4H2V	4.799E+17	2.642E+16	4.174E+15
5H2V	2.570E+11	2.158E+12	3.779E+11
1H3V	2.534E+10	6.153E+10	5.814E+08
2H3V	6.979E+10	5.118E+11	1.876E+10
3H3V	6.709E+16	4.311E+16	3.191E+15
5H3V	2.567E+16	4.549E+14	9.122E+13

Table 40 Calculated Fluence by Material Region for C-Reactor Regime C4

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.299E+19	3.173E+18	1.290E+17
Tank Surface Deposits	2.998E+19	3.035E+18	1.118E+17
Internals	1.683E+20	3.116E+20	3.793E+19
Surface Deposits on Internals	1.683E+20	3.116E+20	3.793E+19
1H1V	2.533E+11	3.038E+11	4.964E+09
2H1V	7.822E+11	1.347E+12	2.655E+10
3H1V	1.310E+12	7.087E+12	3.380E+11
4H1V	1.211E+15	1.277E+14	5.194E+12
5H1V	3.687E+11	5.697E+11	4.403E+10
1H2V	4.667E+11	1.782E+12	1.143E+10
2H2V	5.938E+11	1.007E+13	2.181E+11
3H2V	5.046E+12	6.291E+13	1.137E+13
4H2V	4.190E+17	2.168E+16	3.477E+15
5H2V	4.076E+11	3.146E+12	1.357E+12
1H3V	4.248E+10	1.164E+11	1.545E+09
2H3V	1.082E+11	1.059E+12	3.188E+10
3H3V	1.403E+17	9.913E+16	6.808E+15
5H3V	5.078E+16	9.501E+14	1.625E+14

Table 41 Calculated Fluence by Material Region for C-Reactor Regime C5

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.954E+18	1.497E+18	5.480E+16
Tank Surface Deposits	3.597E+18	1.320E+18	4.093E+16
Internals	2.648E+20	4.525E+20	5.279E+19
Surface Deposits on Internals	2.648E+20	4.525E+20	5.279E+19
1H1V	2.071E+09	—	—
2H1V	6.905E+09	1.176E+10	—
3H1V	1.582E+10	7.860E+10	1.027E+10
4H1V	5.734E+13	6.869E+11	3.689E+10
5H1V	1.827E+10	2.950E+10	1.987E+09
1H2V	6.475E+09	2.458E+10	—
2H2V	2.181E+10	2.110E+11	—
3H2V	1.210E+11	1.494E+12	2.367E+11
4H2V	1.810E+16	1.673E+14	4.350E+13
5H2V	2.825E+10	2.329E+11	—
1H3V	4.142E+09	9.025E+09	6.961E+08
2H3V	3.694E+10	1.155E+11	2.276E+10
3H3V	8.098E+16	4.944E+16	3.661E+15
5H3V	1.999E+16	3.663E+14	6.315E+13

Table 42 Calculated Fluence by Material Region for C-Reactor Regime C6

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	2.472E+18	1.458E+18	5.438E+16
Tank Surface Deposits	4.950E+18	1.297E+18	4.186E+16
Internals	2.199E+20	3.885E+20	4.537E+19
Surface Deposits on Internals	2.199E+20	3.885E+20	4.537E+19
1H1V	9.958E+09	6.391E+09	—
2H1V	1.947E+10	4.484E+10	2.391E+09
3H1V	5.121E+10	2.717E+11	9.280E+09
4H1V	1.321E+14	4.436E+12	2.124E+11
5H1V	8.156E+09	1.124E+09	—
1H2V	1.940E+10	4.375E+10	—
2H2V	1.577E+10	2.944E+11	6.640E+09
3H2V	2.191E+11	2.268E+12	3.907E+11
4H2V	4.357E+16	1.030E+15	2.094E+14
5H2V	—	—	—
1H3V	5.337E+09	1.113E+10	6.078E+08
2H3V	3.680E+10	1.462E+11	2.251E+10
3H3V	7.636E+16	4.737E+16	3.407E+15
5H3V	1.893E+16	3.173E+14	5.454E+13

Table 43 Calculated Fluence by Material Region for C-Reactor Regime C7

Region	Fluence by Energy Group (n/cm^2)		
	Thermal	Epithermal	Fast
Tank	1.479E+19	9.783E+15	8.502E+14
Tank Surface Deposits	3.323E+19	1.166E+16	8.178E+14
Internals	—	—	—
Surface Deposits on Internals	—	—	—
1H1V	—	—	—
2H1V	—	—	—
3H1V	7.293E+09	—	—
4H1V	7.174E+14	—	—
5H1V	1.960E+10	—	—
1H2V	—	—	—
2H2V	—	—	—
3H2V	1.153E+10	—	—
4H2V	2.600E+17	8.499E+11	—
5H2V	1.396E+09	—	—
1H3V	—	—	—
2H3V	—	—	—
3H3V	9.079E+15	8.685E+04	—
5H3V	5.861E+17	1.355E+15	2.868E+14

Table 44 Decayed Curie Contents for Reactor Tank, Aluminum Internals, Surface Deposits and Total System for K-Reactor System

Isotope	Total Activity (Curies)				
	Tank	Internals	Tank Deposits	Internal Deposits	System Totals
h-3	1.38E-03	4.90E-05	6.13E-03	7.54E-03	1.48E+01
be-10	2.22E-06	1.87E-05	1.47E-10	6.62E-10	4.59E-05
c-14	2.84E+02	2.75E-02	1.75E-02	6.05E-02	3.70E+02
si-32	3.02E-06	2.78E-05	7.06E-08	2.36E-06	3.37E-05
p-32	3.02E-06	2.80E-05	7.06E-08	2.36E-06	3.40E-05
cl-36	1.80E-04	4.08E-20	8.64E-01	3.18E+00	4.05E+00
ar-39	3.97E-09	1.26E-15	8.37E-03	1.12E-01	3.43E-01
k-40	3.25E-20	—	1.23E-06	4.65E-06	3.67E-03
ca-41	2.13E-21	1.06E-19	1.06E-02	3.53E-02	3.03E-01
mn-54	2.79E-05	1.46E-04	2.49E-09	1.45E-06	2.05E-04
fe-55	2.51E+03	1.29E+03	2.84E-01	1.30E+01	5.39E+03
co-60	2.03E+04	5.03E+00	2.68E-02	5.19E-02	2.73E+04
ni-59	8.45E+02	1.15E-12	3.94E-02	1.61E-01	1.15E+03
ni-63	8.67E+04	2.52E+01	4.31E+00	1.76E+01	1.15E+05
zn-65	1.19E-08	3.90E-04	5.91E-10	2.01E-07	3.90E-04
kr-85	1.24E-17	—	—	—	8.41E-03
rb-87	8.58E-10	—	—	—	3.70E-04
zr-93	2.31E-03	—	—	—	3.00E-03
nb-93m	2.25E+00	—	—	—	3.99E+00
nb-94	8.20E+00	—	—	—	1.06E+01
mo-93	3.33E+00	—	—	—	5.90E+00
tc-99	5.97E-01	—	1.08E-24	2.28E-23	1.06E+00
ag-108	1.70E+00	—	9.52E-04	9.84E-04	2.33E+00
ag-108m	1.95E+01	—	1.09E-02	1.13E-02	2.68E+01
ag-109m	7.89E-05	—	2.14E-05	2.46E-03	2.57E-03
cd-109	7.89E-05	—	2.14E-05	2.46E-03	2.57E-03
cd-113m	5.15E-01	—	1.75E-01	3.24E+00	7.57E+00
sn-121	4.47E-01	—	1.13E-13	1.41E-15	5.78E-01
sn-121m	5.76E-01	—	1.46E-13	1.81E-15	7.45E-01
sb-125	3.10E-01	—	1.18E-24	—	3.94E-01
te-125m	7.56E-02	—	2.90E-25	2.36E-26	9.63E-02
cs-134	3.10E-22	—	—	—	1.02E-04
cs-135	2.37E-05	—	—	—	3.44E-05
cs-137	1.05E+00	—	—	—	1.36E+00
ba-133	5.06E-09	—	—	—	7.36E-03
ba-137m	9.90E-01	—	—	—	1.29E+00
pm-145	1.69E-11	—	—	—	8.35E-05
pm-147	1.81E-03	—	—	—	2.58E-03
sm-151	3.55E-03	—	—	—	2.15E-02
eu-152	7.18E-05	—	—	—	6.79E-01
eu-154	8.21E-03	—	—	—	5.05E-02
eu-155	1.55E-03	—	—	—	2.06E-03
tb-157	7.31E-11	—	—	—	7.96E-05

Isotope	Total Activity (Curies)				
	Tank	Internals	Tank Deposits	Internal Deposits	System Totals
ho-166m	6.03E-09	—	—	—	2.77E-04
tl-204	1.02E-07	—	—	—	1.36E-03
tl-206	3.66E-04	—	—	—	4.72E-04
pb-205	2.51E-05	—	—	—	9.03E-05
bi-208	7.46E-05	—	—	—	1.07E-04
bi-210m	1.83E-04	—	—	—	2.36E-04
th-231	1.19E-07	—	—	—	5.22E-05
th-234	2.09E-05	—	—	—	1.16E-03
pa-234m	2.09E-05	—	—	—	1.16E-03
u-234	2.17E-05	—	—	—	1.13E-03
u-235	1.19E-07	—	—	—	5.22E-05
u-238	2.09E-05	—	—	—	1.16E-03
np-239	2.68E-04	—	—	—	2.68E-04
pu-238	8.06E-02	—	—	—	8.06E-02
pu-239	7.50E-03	—	—	—	2.05E-02
pu-240	2.88E-02	—	—	—	3.06E-02
pu-241	7.93E-01	—	—	—	7.96E-01
pu-242	7.04E-05	—	—	—	7.04E-05
am-241	8.36E-02	—	—	—	8.40E-02
am-242	1.47E-03	—	—	—	1.47E-03
am-242m	1.48E-03	—	—	—	1.49E-03
am-243	2.68E-04	—	—	—	2.68E-04
cm-242	1.22E-03	—	—	—	1.22E-03
cm-243	1.10E-04	—	—	—	1.10E-04
cm-244	3.78E-03	—	—	—	3.78E-03
Totals	**1.11E+05**	**1.32E+03**	5.76E+00	3.76E+01	1.49E+05

Table 45 Decayed Curie Contents for Regions 1V for K-Reactor System

	Total Activity (Curies)				
Isotope	**1h1v**	**2h1v**	**3h1v**	**4h1v**	**5h1v**
h-3	6.88E-12	9.69E-02	4.11E-01	8.73E+00	4.05E-02
be-10	4.16E-13	4.15E-10	1.99E-09	6.12E-08	3.45E-10
c-14	2.72E-05	4.91E-05	2.05E-04	1.57E-01	5.30E-05
si-32	2.82E-18	5.27E-16	6.43E-15	9.03E-13	3.69E-16
p-32	2.82E-18	5.27E-16	6.44E-15	9.03E-13	3.69E-16
cl-36	1.91E-17	4.87E-06	2.10E-05	4.14E-04	2.81E-06
ar-39	8.59E-28	3.73E-04	5.89E-03	1.46E-01	2.16E-03
k-40	—	3.37E-04	1.17E-03	1.60E-03	5.23E-04
ca-41	—	1.30E-03	6.43E-03	1.78E-01	1.14E-03
mn-54	1.09E-20	8.66E-15	1.38E-11	5.56E-08	1.03E-11
fe-55	2.44E-05	8.42E-05	8.63E-04	1.26E+00	1.43E-04
co-60	1.06E-03	3.13E-03	1.38E-02	1.42E+01	1.41E-03
ni-59	9.59E-05	1.18E-04	3.29E-04	5.36E-01	8.49E-05
ni-63	8.79E-03	1.08E-02	2.99E-02	4.79E+01	7.38E-03
zn-65	1.53E-25	6.05E-17	2.62E-14	7.09E-12	4.31E-15
kr-85	2.43E-09	3.84E-10	6.14E-09	1.65E-07	1.78E-09
rb-87	6.58E-17	3.42E-05	1.18E-04	1.61E-04	5.30E-05
zr-93	2.32E-10	1.14E-08	6.41E-08	3.51E-06	9.26E-09
nb-93m	2.80E-07	7.77E-07	1.04E-05	6.58E-03	3.51E-06
nb-94	9.01E-07	3.55E-06	3.32E-05	1.33E-02	9.67E-06
mo-93	4.08E-07	1.12E-06	1.51E-05	9.70E-03	4.91E-06
tc-99	7.50E-08	2.04E-07	2.72E-06	1.78E-03	8.91E-07
ag-108	2.09E-07	9.06E-07	4.23E-06	1.76E-03	6.33E-07
ag-108m	2.42E-06	1.04E-05	4.87E-05	2.01E-02	7.31E-06
ag-109m	5.68E-15	2.95E-14	8.69E-12	6.79E-08	2.13E-12
cd-109	2.84E-15	1.47E-14	8.69E-12	6.79E-08	2.13E-12
cd-113m	3.36E-06	8.62E-06	4.33E-05	3.70E-02	6.04E-06
sn-121	4.87E-08	1.24E-07	1.02E-06	7.04E-04	2.78E-07
sn-121m	6.29E-08	1.59E-07	1.32E-06	9.08E-04	3.59E-07
sb-125	3.74E-09	9.29E-09	2.07E-07	6.84E-04	5.32E-08
te-125m	9.13E-10	2.28E-09	5.06E-08	1.67E-04	1.30E-08
cs-134	5.03E-18	1.41E-08	4.42E-07	7.81E-05	7.38E-08
cs-135	3.36E-12	7.23E-15	9.85E-14	4.99E-12	3.19E-14
cs-137	9.34E-08	2.48E-25	4.27E-24	5.00E-21	5.50E-26
ba-133	7.62E-21	3.82E-05	1.93E-04	4.81E-03	1.98E-05
ba-137m	8.82E-08	2.34E-25	4.03E-24	4.72E-21	5.03E-26
pm-145	1.93E-23	5.09E-07	2.39E-06	5.26E-05	2.66E-07
pm-147	1.91E-11	4.82E-15	1.07E-13	1.35E-11	2.25E-14
sm-151	4.01E-09	5.18E-05	2.43E-04	5.20E-03	3.10E-05
eu-152	7.75E-16	4.64E-03	1.93E-02	4.00E-01	1.92E-03
eu-154	1.57E-15	1.69E-04	1.02E-03	2.98E-02	1.04E-04
eu-155	1.77E-11	6.47E-07	4.87E-06	2.36E-04	4.62E-07
tb-157	3.22E-20	2.28E-07	2.22E-06	6.33E-05	3.44E-07
ho-166m	9.08E-20	1.04E-06	7.80E-06	2.08E-04	1.18E-06
tl-204	4.52E-16	2.20E-06	1.56E-05	9.49E-04	1.49E-06

Isotope	Total Activity (Curies)				
	1h1v	2h1v	3h1v	4h1v	5h1v
tl-206	3.82E-11	3.53E-11	9.54E-11	4.36E-07	1.50E-11
pb-205	2.52E-12	2.90E-11	1.57E-10	2.54E-08	2.37E-11
bi-208	—	3.10E-12	1.92E-11	8.22E-08	1.55E-11
bi-210m	1.91E-11	1.77E-11	4.77E-11	2.18E-07	1.50E-11
th-231	7.38E-08	9.09E-07	2.99E-06	2.64E-05	1.38E-06
th-234	1.60E-06	1.97E-05	6.49E-05	5.72E-04	3.01E-05
pa-234m	1.60E-06	1.97E-05	6.49E-05	5.72E-04	3.01E-05
u-234	1.55E-06	1.91E-05	6.30E-05	5.56E-04	2.92E-05
u-235	7.38E-08	9.09E-07	2.99E-06	2.64E-05	1.38E-06
u-238	1.60E-06	1.97E-05	6.49E-05	5.72E-04	3.01E-05
np-239	—	—	—	1.13E-23	—
pu-238	2.66E-19	2.02E-15	4.53E-14	1.19E-10	5.35E-15
pu-239	5.31E-09	6.38E-08	4.44E-07	7.55E-05	6.91E-08
pu-240	2.83E-14	3.39E-13	2.87E-12	6.99E-09	1.26E-13
pu-241	1.42E-18	1.67E-17	3.16E-16	1.94E-11	4.06E-18
pu-242	1.83E-28	2.14E-27	4.59E-26	2.72E-20	1.81E-28
am-241	2.68E-19	3.15E-18	5.61E-17	2.51E-12	8.42E-19
am-242	7.16E-27	8.51E-26	4.00E-24	8.67E-18	3.08E-26
am-242m	7.19E-27	8.55E-26	4.01E-24	8.67E-18	3.10E-26
am-243	—	—	7.04E-31	1.13E-23	—
cm-242	5.92E-27	7.03E-26	3.30E-24	7.14E-18	2.55E-26
cm-243	—	—	5.37E-31	4.22E-24	—
cm-244	—	—	—	8.88E-27	—
Totals	**9.97E-03**	**1.18E-01**	**4.92E-01**	**7.35E+01**	**5.57E-02**

Table 46 Decayed Curie Contents for Regions 2V for K-Reactor System

	Total Activity (Curies)				
Isotope	**1h2v**	**2h2v**	**3h2v**	**4h2v**	**5h2v**
h-3	1.13E-14	6.99E-06	5.45E+00	1.61E-05	7.20E-02
be-10	6.01E-16	1.01E-13	2.08E-07	2.31E-05	3.16E-09
c-14	2.68E-08	1.78E-07	1.02E+00	3.69E+01	1.66E-02
si-32	8.71E-25	3.87E-21	1.08E-10	4.84E-07	8.85E-14
p-32	8.71E-25	3.87E-21	1.08E-10	4.86E-07	8.85E-14
cl-36	1.06E-23	3.93E-10	2.60E-04	1.07E-06	4.09E-06
ar-39	—	4.02E-07	6.60E-02	1.36E-12	1.98E-03
k-40	—	1.02E-05	2.50E-05	—	6.11E-06
ca-41	—	9.62E-08	6.82E-02	—	1.66E-03
mn-54	7.43E-19	9.31E-14	2.84E-07	2.29E-05	4.20E-09
fe-55	5.23E-07	7.27E-07	8.94E+00	1.00E+03	7.26E-02
co-60	5.55E-06	1.08E-05	7.25E+01	2.35E+03	8.05E-01
ni-59	9.32E-08	6.00E-07	3.59E+00	1.29E+02	5.80E-02
ni-63	8.88E-06	5.41E-05	3.27E+02	1.18E+04	5.22E+00
zn-65	1.34E-27	2.44E-18	2.80E-12	2.33E-10	2.11E-14
kr-85	4.34E-12	4.45E-13	7.96E-08	3.21E-03	2.06E-09
rb-87	6.45E-20	1.04E-06	2.37E-06	8.55E-11	6.18E-07
zr-93	3.54E-13	3.22E-12	9.49E-06	3.04E-04	1.52E-07
nb-93m	9.47E-10	5.26E-09	1.24E-02	1.44E+00	1.86E-04
nb-94	2.02E-09	1.04E-08	3.80E-02	1.10E+00	5.51E-04
mo-93	1.53E-09	7.67E-09	1.82E-02	2.11E+00	2.67E-04
tc-99	2.83E-10	1.34E-09	3.30E-03	3.82E-01	4.71E-05
ag-108	1.56E-10	1.76E-09	7.91E-03	2.69E-01	1.26E-04
ag-108m	3.57E-09	2.02E-08	9.11E-02	3.09E+00	1.44E-03
ag-109m	2.93E-14	3.12E-14	1.68E-07	4.55E-06	1.41E-09
cd-109	1.46E-14	1.57E-14	1.68E-07	4.55E-06	1.41E-09
cd-113m	9.58E-09	3.34E-08	1.28E-01	1.05E+00	1.88E-03
sn-121	1.29E-10	5.97E-10	1.99E-03	5.86E-02	2.94E-05
sn-121m	1.65E-10	7.73E-10	2.56E-03	7.53E-02	3.77E-05
sb-125	2.99E-10	3.06E-10	1.34E-03	3.01E-02	1.11E-05
te-125m	7.30E-11	7.48E-11	3.27E-04	7.37E-03	2.73E-06
cs-134	3.29E-19	2.90E-11	2.18E-05	8.27E-07	1.77E-07
cs-135	3.42E-15	5.85E-18	3.40E-11	4.64E-06	6.34E-14
cs-137	1.12E-10	7.11E-10	9.71E-18	1.32E-01	6.83E-22
ba-133	1.40E-23	3.43E-09	2.27E-03	4.20E-12	2.88E-05
ba-137m	1.06E-10	6.71E-10	4.58E-18	1.25E-01	6.44E-22
pm-145	3.90E-26	4.14E-11	2.74E-05	3.54E-13	3.80E-07
pm-147	4.73E-13	1.07E-17	4.23E-12	2.39E-04	5.51E-14
sm-151	4.20E-12	4.21E-09	3.39E-03	3.46E-03	4.13E-05
eu-152	4.16E-21	3.28E-07	2.50E-01	1.22E-04	3.44E-03
eu-154	2.03E-18	1.89E-08	1.10E-02	4.61E-05	1.32E-04
eu-155	8.78E-14	1.16E-10	8.29E-05	7.04E-05	7.54E-07
tb-157	3.29E-23	4.14E-11	1.33E-05	5.73E-12	1.88E-07
ho-166m	8.97E-23	1.43E-10	5.84E-05	1.60E-11	8.51E-07
tl-204	1.60E-17	4.48E-10	3.86E-04	3.58E-07	3.57E-06

Isotope	Total Activity (Curies)				
	1h2v	2h2v	3h2v	4h2v	5h2v
tl-206	3.86E-14	2.07E-13	1.48E-06	4.76E-05	2.36E-08
pb-205	3.80E-15	2.58E-14	9.93E-08	6.09E-05	1.62E-09
bi-208	—	3.25E-13	4.40E-07	2.23E-05	1.43E-08
bi-210m	3.86E-14	2.07E-13	7.42E-07	2.38E-05	1.17E-08
th-231	1.46E-07	2.16E-07	3.69E-06	2.64E-06	1.02E-06
th-234	3.18E-06	4.70E-06	8.02E-05	6.27E-05	2.22E-05
pa-234m	3.18E-06	4.70E-06	8.02E-05	6.27E-05	2.22E-05
u-234	3.08E-06	4.55E-06	7.74E-05	5.99E-05	2.15E-05
u-235	1.46E-07	2.16E-07	3.69E-06	2.64E-06	1.02E-06
u-238	3.18E-06	4.70E-06	8.02E-05	6.27E-05	2.22E-05
np-239	—	—	2.43E-17	1.90E-09	3.59E-24
pu-238	6.48E-25	5.20E-20	1.79E-08	3.40E-05	3.27E-11
pu-239	1.14E-11	6.71E-11	2.09E-04	5.65E-03	3.27E-06
pu-240	2.89E-20	8.38E-19	8.45E-07	1.07E-03	7.76E-10
pu-241	2.95E-27	2.08E-25	4.62E-08	2.19E-03	2.04E-12
pu-242	—	—	2.71E-15	6.25E-09	8.46E-21
am-241	2.62E-28	3.34E-26	5.94E-09	2.92E-04	3.17E-13
am-242	—	—	8.23E-13	1.48E-06	2.23E-18
am-242m	—	—	8.29E-13	1.49E-06	2.23E-18
am-243	—	—	2.43E-17	1.90E-09	3.59E-24
cm-242	—	—	6.82E-13	1.23E-06	1.84E-18
cm-243	—	—	9.33E-18	7.57E-10	1.25E-24
cm-244	—	—	2.80E-19	7.95E-10	2.01E-27
Totals	**2.80E-05**	**1.05E-04**	**4.19E+02**	**1.53E+04**	**6.26E+00**

Table 47 Decayed Curie Contents for Regions 3V for K-Reactor System

	Total Activity (Curies)			
Isotope	**1h3v**	**2h3v**	**3h3v**	**5h3v**
h-3	3.92E-14	6.02E-13	1.45E-05	4.83E-06
be-10	1.47E-15	1.20E-12	9.92E-07	5.62E-07
c-14	9.74E-08	1.56E-06	3.15E+01	1.66E+01
si-32	1.91E-25	2.09E-21	8.13E-09	1.55E-09
p-32	1.91E-25	2.09E-21	8.13E-09	1.55E-09
cl-36	1.45E-23	2.89E-21	6.38E-07	1.03E-07
ar-39	—	—	5.53E-13	2.76E-14
k-40	—	—	—	—
ca-41	—	—	—	—
mn-54	9.50E-19	2.06E-11	5.39E-06	1.01E-06
fe-55	1.90E-06	3.16E-05	4.51E+02	1.11E+02
co-60	1.43E-05	3.41E-04	3.48E+03	1.02E+03
ni-59	3.45E-07	5.20E-06	1.11E+02	5.84E+01
ni-63	3.31E-05	4.84E-04	1.05E+04	5.34E+03
zn-65	3.21E-27	2.17E-24	7.46E-11	3.67E-12
kr-85	1.49E-11	2.46E-10	3.74E-03	1.46E-03
rb-87	2.35E-19	4.04E-18	7.28E-11	3.87E-11
zr-93	8.08E-13	2.55E-11	2.49E-04	1.27E-04
nb-93m	8.24E-10	8.51E-08	2.01E-01	8.21E-02
nb-94	3.06E-09	1.52E-07	8.65E-01	4.17E-01
mo-93	1.31E-09	1.35E-07	3.10E-01	1.20E-01
tc-99	2.44E-10	2.36E-08	5.72E-02	2.20E-02
ag-108	3.80E-10	2.05E-08	2.31E-01	1.16E-01
ag-108m	8.75E-09	2.36E-07	2.65E+00	1.34E+00
ag-109m	4.30E-14	3.56E-12	7.84E-06	1.46E-06
cd-109	2.15E-14	1.78E-12	7.84E-06	1.46E-06
cd-113m	1.72E-08	6.57E-07	1.35E+00	1.07E+00
sn-121	1.79E-10	9.90E-09	4.82E-02	2.17E-02
sn-121m	2.31E-10	1.28E-08	6.24E-02	2.78E-02
sb-125	2.58E-10	2.59E-08	4.42E-02	8.21E-03
te-125m	6.31E-11	6.32E-09	1.08E-02	2.00E-03
cs-134	1.25E-18	2.15E-17	8.98E-07	6.19E-08
cs-135	1.25E-14	2.36E-13	3.93E-06	2.05E-06
cs-137	3.94E-10	7.18E-09	1.23E-01	5.70E-02
ba-133	4.77E-23	7.37E-22	1.73E-12	1.62E-13
ba-137m	3.73E-10	6.78E-09	1.16E-01	5.38E-02
pm-145	5.16E-26	5.69E-24	2.42E-13	3.13E-14
pm-147	1.73E-12	3.48E-11	4.20E-04	1.01E-04
sm-151	1.51E-11	3.18E-10	3.40E-03	2.16E-03
eu-152	9.34E-21	1.38E-18	1.10E-04	1.98E-05
eu-154	6.98E-18	1.08E-16	3.56E-05	3.75E-06
eu-155	3.04E-13	8.80E-12	9.31E-05	2.35E-05
tb-157	1.18E-22	1.83E-21	3.36E-12	5.48E-13
ho-166m	3.23E-22	6.87E-21	8.65E-12	1.35E-12
tl-204	1.07E-17	2.99E-14	1.43E-08	3.59E-09

Isotope	Total Activity (Curies)			
	1h3v	2h3v	3h3v	5h3v
tl-206	6.53E-14	2.93E-12	3.80E-05	1.87E-05
pb-205	8.81E-15	2.91E-13	2.72E-06	1.39E-06
bi-208	—	6.57E-12	7.94E-06	2.07E-06
bi-210m	6.53E-14	2.93E-12	1.90E-05	9.33E-06
th-231	1.51E-06	1.62E-06	3.40E-06	6.07E-06
th-234	3.29E-05	3.50E-05	7.84E-05	1.34E-04
pa-234m	3.29E-05	3.50E-05	7.84E-05	1.34E-04
u-234	3.19E-05	3.39E-05	7.51E-05	1.30E-04
u-235	1.51E-06	1.62E-06	3.40E-06	6.07E-06
u-238	3.29E-05	3.50E-05	7.84E-05	1.34E-04
np-239	—	—	3.24E-10	1.28E-12
pu-238	1.60E-25	1.36E-18	8.41E-06	8.13E-07
pu-239	1.80E-11	8.57E-10	4.68E-03	2.43E-03
pu-240	1.68E-20	1.06E-17	6.00E-04	9.58E-05
pu-241	2.58E-28	7.33E-24	9.92E-04	3.58E-05
pu-242	—	—	1.57E-09	2.12E-11
am-241	2.31E-29	6.51E-25	9.87E-05	4.78E-06
am-242	—	—	3.22E-07	5.77E-09
am-242m	—	—	3.23E-07	5.79E-09
am-243	—	—	3.24E-10	1.28E-12
cm-242	—	—	2.66E-07	4.77E-09
cm-243	—	—	1.77E-10	4.64E-13
cm-244	—	—	1.03E-10	8.21E-14
Totals	**1.84E-04**	**1.01E-03**	**1.46E+04**	**6.56E+03**

Table 48 Decayed Curie Contents for Reactor Tank, Aluminum Internals, Surface Deposits and Total System for L-Reactor System

	Total Activity (Curies)				
Isotope	Tank	Internals	Tank Deposits	Internal Deposits	System Totals
h-3	4.09E-04	1.32E-05	1.95E-03	3.95E-01	8.18E+00
be-10	1.61E-06	5.46E-07	5.30E-11	4.82E-09	1.99E-05
c-14	1.69E+02	2.91E-03	1.05E-02	6.22E-01	2.21E+02
si-32	2.02E-06	4.63E-06	4.68E-08	2.54E-05	3.24E-05
p-32	2.02E-06	4.63E-06	4.68E-08	2.54E-05	3.24E-05
cl-36	6.35E-05	6.46E-16	5.52E-01	2.69E+01	2.75E+01
ar-39	9.02E-10	1.16E-16	6.06E-03	2.07E-01	3.68E-01
k-40	3.30E-21	—	7.79E-07	3.98E-05	3.71E-03
ca-41	—	2.42E-20	6.41E-03	3.78E-01	5.65E-01
mn-54	1.83E-05	8.72E-08	1.58E-09	8.66E-08	4.03E-05
fe-55	8.77E+02	4.36E+01	9.81E-02	4.42E+01	1.54E+03
co-60	6.47E+03	3.29E+00	4.76E-03	4.42E+00	8.61E+03
ni-59	5.37E+02	6.01E-12	2.64E-02	1.10E+00	7.19E+02
ni-63	5.09E+04	6.19E-01	2.62E+00	1.55E+02	6.72E+04
kr-85	2.53E-20	—	—	—	3.44E-03
rb-87	6.02E-10	—	—	—	3.70E-04
zr-93	1.37E-03	—	—	—	1.79E-03
nb-93m	1.40E+00	—	—	—	2.63E+00
nb-94	4.92E+00	—	—	—	6.39E+00
mo-93	1.99E+00	—	—	—	3.73E+00
tc-99	3.63E-01	—	5.93E-25	1.90E-22	6.81E-01
ag-108	1.07E+00	—	3.64E-04	5.29E-02	1.49E+00
ag-108m	1.23E+01	—	4.18E-03	6.06E-01	1.71E+01
ag-109m	4.09E-05	—	1.35E-05	5.75E-04	6.38E-04
cd-109	4.09E-05	—	1.35E-05	5.75E-04	6.38E-04
cd-113m	5.10E-01	—	1.71E-01	2.76E+00	5.53E+00
sn-121	2.51E-01	—	8.05E-15	4.08E-11	3.26E-01
sn-121m	3.22E-01	—	1.04E-14	5.25E-11	4.18E-01
sn-126	9.40E-06	—	—	—	1.08E-05
sb-125	1.07E-01	—	3.01E-26	5.55E-19	1.37E-01
sb-126m	9.40E-06	—	—	—	1.08E-05
te-125m	2.61E-02	—	7.38E-27	1.35E-19	3.33E-02
cs-134	1.38E-24	—	—	—	4.50E-05
cs-135	1.40E-05	—	—	—	2.02E-05
cs-137	5.80E-01	—	—	—	7.43E-01
ba-133	6.32E-10	—	—	—	3.66E-03
ba-137m	5.48E-01	—	—	—	7.02E-01
pm-145	7.01E-12	—	—	—	4.83E-05
pm-147	7.26E-04	—	—	—	9.92E-04
sm-151	2.94E-03	—	—	—	1.46E-02
eu-152	2.60E-04	—	—	—	3.66E-01
eu-154	2.30E-03	—	—	—	2.17E-02
eu-155	4.39E-04	—	—	—	6.04E-04

Isotope	Total Activity (Curies)				
	Tank	Internals	Tank Deposits	Internal Deposits	System Totals
tb-157	5.94E-11	—	—	—	5.49E-05
ho-166m	1.55E-09	—	—	—	1.94E-04
tl-204	2.97E-08	—	—	—	4.52E-04
tl-206	2.17E-04	—	—	—	2.81E-04
pb-205	1.50E-05	—	—	—	6.07E-05
bi-208	4.44E-05	—	—	—	6.39E-05
bi-210m	1.09E-04	—	—	—	1.41E-04
th-231	2.80E-07	—	—	—	5.26E-05
th-234	2.11E-05	—	—	—	1.16E-03
pa-234m	2.11E-05	—	—	—	1.16E-03
u-234	1.83E-05	—	—	—	1.13E-03
u-235	2.80E-07	—	—	—	5.26E-05
u-238	2.11E-05	—	—	—	1.16E-03
np-239	4.21E-05	—	—	—	4.21E-05
pu-238	1.95E-02	—	—	—	1.96E-02
pu-239	7.36E-03	—	—	—	1.55E-02
pu-240	1.95E-02	—	—	—	2.03E-02
pu-241	2.94E-01	—	—	—	2.95E-01
pu-242	1.98E-05	—	—	—	1.98E-05
am-241	4.85E-02	—	—	—	4.86E-02
am-242	1.04E-03	—	—	—	1.04E-03
am-242m	1.05E-03	—	—	—	1.05E-03
am-243	4.21E-05	—	—	—	4.21E-05
cm-242	8.61E-04	—	—	—	8.61E-04
cm-243	2.60E-05	—	—	—	2.60E-05
cm-244	2.44E-04	—	—	—	2.44E-04
Totals	**5.90E+04**	**4.76E+01**	**3.49E+00**	**2.37E+02**	**7.84E+04**

Table 49 Decayed Curie Contents for Regions 1V for L-Reactor System

	Total Activity (Curies)				
Isotope	**1h1v**	**2h1v**	**3h1v**	**4h1v**	**5h1v**
h-3	1.06E-15	8.04E-05	3.80E-02	4.69E+00	2.83E-02
be-10	8.51E-17	4.09E-13	2.32E-10	4.41E-08	2.57E-10
c-14	5.58E-09	4.82E-08	2.39E-05	1.13E-01	3.95E-05
si-32	3.45E-26	1.31E-22	2.96E-17	7.60E-13	2.55E-16
p-32	3.45E-26	1.31E-22	2.96E-17	7.65E-13	2.55E-16
cl-36	9.38E-25	4.78E-09	2.45E-06	2.97E-04	2.09E-06
ar-39	—	3.62E-07	6.80E-04	1.04E-01	1.60E-03
k-40	—	3.37E-04	1.17E-03	1.60E-03	5.23E-04
ca-41	—	1.28E-06	7.51E-04	1.28E-01	8.49E-04
mn-54	5.34E-21	9.17E-15	1.35E-11	3.80E-08	1.09E-11
fe-55	7.87E-09	4.84E-07	1.98E-04	4.56E-01	6.87E-05
co-60	1.37E-07	3.35E-06	1.26E-03	5.15E+00	8.42E-04
ni-59	1.97E-08	1.16E-07	3.85E-05	3.84E-01	6.31E-05
ni-63	1.74E-06	1.03E-05	3.38E-03	3.34E+01	5.47E-03
kr-85	3.57E-13	3.15E-13	5.54E-10	8.47E-08	1.22E-09
rb-87	1.34E-20	3.42E-05	1.18E-04	1.61E-04	5.30E-05
zr-93	4.76E-14	1.12E-11	7.49E-09	2.53E-06	6.88E-09
nb-93m	5.96E-11	7.86E-10	1.26E-06	4.92E-03	2.63E-06
nb-94	1.85E-10	3.48E-09	3.86E-06	9.54E-03	7.17E-06
mo-93	8.36E-11	1.10E-09	1.76E-06	6.94E-03	3.66E-06
tc-99	1.57E-11	2.04E-10	3.24E-07	1.29E-03	6.63E-07
ag-108	2.08E-11	4.35E-10	4.83E-07	1.23E-03	4.69E-07
ag-108m	4.79E-10	1.00E-08	5.54E-06	1.42E-02	5.40E-06
ag-109m	2.44E-16	1.30E-14	6.57E-12	4.18E-08	1.68E-12
cd-109	1.22E-16	6.52E-15	6.57E-12	4.18E-08	1.68E-12
cd-113m	5.33E-10	7.19E-09	4.07E-06	2.08E-02	4.25E-06
sn-121	9.32E-12	1.15E-10	1.13E-07	4.80E-04	2.05E-07
sn-121m	1.20E-11	1.48E-10	1.46E-07	6.17E-04	2.64E-07
sn-126	1.36E-16	8.06E-15	3.99E-12	3.17E-09	3.49E-12
sb-125	1.21E-12	5.36E-11	4.75E-08	2.48E-04	2.56E-08
sb-126m	1.36E-16	8.06E-15	3.99E-12	3.17E-09	3.49E-12
te-125m	2.93E-13	1.31E-11	1.16E-08	6.07E-05	6.24E-09
cs-134	5.33E-21	3.28E-10	1.82E-07	3.39E-05	3.97E-08
cs-135	7.22E-16	5.00E-18	9.64E-15	3.96E-12	2.37E-14
cs-137	1.69E-11	1.03E-09	2.11E-27	2.20E-21	2.49E-26
ba-133	1.12E-24	3.15E-08	1.74E-05	2.44E-03	1.36E-05
ba-137m	1.59E-11	9.73E-10	4.72E-07	2.08E-21	2.16E-26
pm-145	1.88E-27	4.33E-10	2.34E-07	3.12E-05	1.89E-07
pm-147	7.11E-15	3.30E-17	2.67E-14	4.98E-12	1.09E-14
sm-151	7.86E-13	4.91E-08	2.74E-05	3.60E-03	2.28E-05
eu-152	2.23E-22	3.86E-06	1.82E-03	2.20E-01	1.35E-03
eu-154	1.32E-19	1.41E-07	8.96E-05	1.39E-02	7.03E-05
eu-155	2.35E-15	8.08E-10	4.77E-07	8.11E-05	2.64E-07
tb-157	6.39E-24	2.20E-10	2.53E-07	4.48E-05	2.55E-07
ho-166m	1.85E-23	1.02E-09	9.10E-07	1.49E-04	8.77E-07

Isotope	Total Activity (Curies)				
	1h1v	2h1v	3h1v	4h1v	5h1v
tl-204	6.93E-20	4.24E-09	1.94E-06	3.12E-04	7.79E-07
tl-206	3.91E-15	1.73E-14	5.57E-12	3.12E-07	1.11E-11
pb-205	5.17E-16	2.86E-14	1.83E-11	1.82E-08	1.76E-11
bi-208	—	3.04E-15	2.25E-12	5.92E-08	1.16E-11
bi-210m	3.91E-15	1.73E-14	5.57E-12	1.56E-07	1.11E-11
th-231	7.38E-08	9.09E-07	2.99E-06	2.64E-05	1.38E-06
th-234	1.60E-06	1.97E-05	6.49E-05	5.72E-04	3.01E-05
pa-234m	1.60E-06	1.97E-05	6.49E-05	5.72E-04	3.01E-05
u-234	1.55E-06	1.91E-05	6.30E-05	5.56E-04	2.92E-05
u-235	7.38E-08	9.09E-07	2.99E-06	2.64E-05	1.38E-06
u-238	1.60E-06	1.97E-05	6.49E-05	5.72E-04	3.01E-05
np-239	—	—	—	1.95E-24	—
pu-238	1.08E-26	1.94E-21	6.07E-16	5.87E-11	2.94E-15
pu-239	1.08E-12	6.27E-11	5.18E-08	5.41E-05	5.15E-08
pu-240	1.19E-21	3.28E-19	3.92E-14	3.60E-09	6.96E-14
pu-241	1.06E-29	1.66E-26	4.58E-19	5.08E-12	1.55E-18
pu-242	—	—	8.16E-30	7.91E-21	5.75E-29
am-241	2.36E-30	2.97E-27	9.10E-20	9.90E-13	3.52E-19
am-242	—	—	1.32E-27	1.35E-18	7.17E-27
am-242m	—	—	1.33E-27	1.36E-18	7.24E-27
am-243	—	—	—	1.95E-24	—
cm-242	—	—	1.09E-27	1.12E-18	5.94E-27
cm-243	—	—	—	8.16E-25	—
cm-244	—	—	—	8.37E-28	—
Totals	**8.42E-06**	**5.51E-04**	**4.79E-02**	**4.48E+01**	**3.94E-02**

Table 50 Decayed Curie Contents for Regions 2V for L-Reactor System

	Total Activity (Curies)				
Isotope	**1h2v**	**2h2v**	**3h2v**	**4h2v**	**5h2v**
h-3	3.88E-15	8.72E-07	2.99E+00	7.21E-06	3.77E-02
be-10	2.41E-16	1.01E-14	1.51E-07	1.67E-05	1.99E-09
c-14	1.08E-08	1.78E-08	7.36E-01	2.65E+01	1.06E-02
si-32	2.85E-25	5.20E-24	8.83E-11	3.79E-07	5.87E-14
p-32	2.85E-25	5.20E-24	8.83E-11	3.79E-07	5.87E-14
cl-36	1.66E-24	3.93E-11	1.88E-04	5.39E-07	2.59E-06
ar-39	—	4.02E-08	4.73E-02	4.92E-13	1.24E-03
k-40	—	1.02E-05	2.45E-05	—	6.10E-06
ca-41	—	9.62E-09	4.94E-02	—	1.05E-03
mn-54	1.19E-18	1.24E-13	2.34E-07	1.79E-05	3.80E-09
fe-55	3.19E-07	4.08E-07	3.51E+00	3.83E+02	2.95E-02
co-60	2.21E-06	2.62E-06	2.74E+01	8.84E+02	3.19E-01
ni-59	3.75E-08	6.00E-08	2.61E+00	9.23E+01	3.68E-02
ni-63	3.44E-06	5.44E-06	2.31E+02	8.22E+03	3.24E+00
kr-85	1.49E-12	5.88E-14	4.18E-08	1.68E-03	1.04E-09
rb-87	2.59E-20	1.04E-06	2.37E-06	6.15E-11	6.18E-07
zr-93	1.42E-13	3.22E-13	6.87E-06	2.17E-04	9.67E-08
nb-93m	3.96E-10	5.10E-10	9.33E-03	1.07E+00	1.21E-04
nb-94	8.10E-10	1.04E-09	2.75E-02	7.86E-01	3.49E-04
mo-93	6.12E-10	7.67E-10	1.32E-02	1.51E+00	1.69E-04
tc-99	1.14E-10	1.35E-10	2.41E-03	2.74E-01	2.99E-05
ag-108	6.08E-11	8.84E-11	5.62E-03	1.90E-01	7.81E-05
ag-108m	1.40E-09	2.03E-09	6.43E-02	2.18E+00	8.98E-04
ag-109m	3.46E-14	3.46E-14	1.16E-07	3.01E-06	1.03E-09
cd-109	1.73E-14	1.73E-14	1.16E-07	3.01E-06	1.03E-09
cd-113m	3.31E-09	3.96E-09	7.36E-02	6.75E-01	1.02E-03
sn-121	4.87E-11	6.09E-11	1.36E-03	3.98E-02	1.79E-05
sn-121m	6.27E-11	7.86E-11	1.76E-03	5.14E-02	2.31E-05
sn-126	2.62E-16	5.13E-16	1.86E-08	7.69E-07	2.67E-10
sb-125	1.83E-10	1.71E-10	5.26E-04	1.16E-02	4.52E-06
sb-126m	2.62E-16	5.13E-16	1.86E-08	7.69E-07	2.67E-10
te-125m	4.45E-11	4.18E-11	1.29E-04	2.82E-03	1.11E-06
cs-134	2.55E-19	2.15E-11	1.04E-05	2.81E-07	8.78E-08
cs-135	1.39E-15	5.85E-19	2.70E-11	3.26E-06	3.55E-14
cs-137	4.07E-11	7.42E-11	2.06E-18	8.47E-02	2.13E-22
ba-133	4.77E-24	4.58E-10	1.18E-03	1.07E-12	1.45E-05
ba-137m	3.84E-11	7.02E-11	1.95E-18	8.00E-02	2.01E-22
pm-145	1.36E-26	4.64E-12	1.65E-05	1.48E-13	2.12E-07
pm-147	2.99E-13	6.25E-18	1.70E-12	9.29E-05	2.29E-14
sm-151	1.63E-12	4.24E-10	2.26E-03	2.66E-03	2.55E-05
eu-152	1.21E-21	3.96E-08	1.41E-01	4.01E-05	1.83E-03
eu-154	7.09E-19	2.86E-09	5.27E-03	1.41E-05	6.29E-05
eu-155	3.69E-14	3.28E-11	2.93E-05	2.33E-05	2.85E-07
tb-157	1.29E-23	4.14E-12	9.49E-06	3.00E-12	1.17E-07
ho-166m	3.59E-23	1.43E-11	4.22E-05	8.19E-12	5.38E-07

Isotope	Total Activity (Curies)				
	1h2v	2h2v	3h2v	4h2v	5h2v
tl-204	7.66E-18	1.69E-10	1.36E-04	1.24E-07	1.32E-06
tl-206	1.55E-14	2.06E-14	1.08E-06	3.42E-05	1.48E-08
pb-205	1.53E-15	2.58E-15	7.20E-08	4.36E-05	1.03E-09
bi-208	—	3.25E-14	3.18E-07	1.60E-05	9.03E-09
bi-210m	1.55E-14	2.06E-14	5.39E-07	1.71E-05	7.44E-09
th-231	1.46E-07	2.16E-07	3.69E-06	2.70E-06	1.02E-06
th-234	3.18E-06	4.70E-06	8.02E-05	6.27E-05	2.22E-05
pa-234m	3.18E-06	4.70E-06	8.02E-05	6.27E-05	2.22E-05
u-234	3.08E-06	4.55E-06	7.74E-05	6.01E-05	2.15E-05
u-235	1.46E-07	2.16E-07	3.69E-06	2.70E-06	1.02E-06
u-238	3.18E-06	4.70E-06	8.02E-05	6.27E-05	2.22E-05
np-239	—	—	3.59E-18	2.66E-10	3.31E-25
pu-238	1.02E-25	5.63E-22	8.94E-09	1.24E-05	1.27E-11
pu-239	4.58E-12	6.71E-12	1.52E-04	4.20E-03	2.06E-06
pu-240	4.66E-21	8.47E-21	4.42E-07	5.65E-04	3.10E-10
pu-241	1.90E-28	3.07E-28	1.26E-08	6.03E-04	4.13E-13
pu-242	—	—	8.18E-16	1.86E-09	1.47E-21
am-241	1.69E-29	3.12E-29	2.40E-09	1.18E-04	8.38E-14
am-242	—	—	1.39E-13	2.58E-07	2.30E-19
am-242m	—	—	1.39E-13	2.60E-07	2.31E-19
am-243	—	—	3.59E-18	2.66E-10	3.31E-25
cm-242	—	—	1.15E-13	2.14E-07	1.91E-19
cm-243	—	—	1.93E-18	1.55E-10	2.15E-25
cm-244	—	—	2.47E-20	6.48E-11	1.04E-28
Totals	**1.89E-05**	**3.99E-05**	**2.68E+02**	**9.62E+03**	**3.68E+00**

Table 51 Decayed Curie Contents for Regions 3V for L-Reactor System

	Total Activity (Curies)			
Isotope	**1h3v**	**2h3v**	**3h3v**	**5h3v**
h-3	2.29E-14	2.44E-13	4.14E-06	1.92E-06
be-10	1.45E-15	9.01E-13	5.24E-07	3.11E-07
c-14	1.07E-07	1.18E-06	1.52E+01	8.93E+00
si-32	1.61E-25	2.40E-21	3.75E-09	9.49E-10
p-32	1.61E-25	2.40E-21	3.75E-09	9.49E-10
cl-36	1.73E-23	1.58E-21	1.46E-07	2.92E-08
ar-39	—	—	6.24E-14	4.28E-15
k-40	—	—	—	—
ca-41	—	—	—	—
mn-54	3.33E-20	2.72E-12	2.85E-06	8.13E-07
fe-55	4.83E-07	4.17E-06	1.41E+02	4.18E+01
co-60	3.92E-06	6.26E-05	8.83E+02	3.26E+02
ni-59	3.82E-07	3.92E-06	5.43E+01	3.15E+01
ni-63	3.41E-05	3.41E-04	4.87E+03	2.80E+03
kr-85	7.89E-12	9.10E-11	1.18E-03	5.82E-04
rb-87	2.58E-19	3.05E-18	3.54E-11	2.09E-11
zr-93	7.85E-13	1.93E-11	1.21E-04	6.86E-05
nb-93m	3.11E-10	7.16E-08	1.05E-01	4.57E-02
nb-94	2.39E-09	1.15E-07	4.20E-01	2.25E-01
mo-93	4.42E-10	1.02E-07	1.50E-01	6.45E-02
tc-99	8.44E-11	1.79E-08	2.79E-02	1.20E-02
ag-108	3.57E-10	1.47E-08	1.08E-01	6.13E-02
ag-108m	8.20E-09	1.68E-07	1.24E+00	7.05E-01
ag-109m	8.87E-15	5.90E-13	4.01E-06	9.90E-07
cd-109	4.44E-15	2.95E-13	4.01E-06	9.90E-07
cd-113m	8.75E-09	2.89E-07	7.61E-01	5.57E-01
sn-121	1.16E-10	6.57E-09	2.14E-02	1.11E-02
sn-121m	1.49E-10	8.47E-09	2.76E-02	1.42E-02
sn-126	2.62E-15	3.29E-14	4.03E-07	2.24E-07
sb-125	2.13E-11	3.41E-09	1.39E-02	3.11E-03
sb-126m	2.62E-15	3.29E-14	4.03E-07	2.24E-07
te-125m	5.16E-12	8.34E-10	3.38E-03	7.56E-04
cs-134	3.67E-19	3.12E-18	1.73E-07	1.60E-08
cs-135	1.39E-14	1.80E-13	1.88E-06	1.10E-06
cs-137	3.35E-10	4.25E-09	5.01E-02	2.77E-02
ba-133	2.48E-23	2.65E-22	2.30E-13	3.27E-14
ba-137m	3.17E-10	4.02E-09	4.71E-02	2.62E-02
pm-145	2.39E-26	2.80E-24	4.38E-14	7.42E-15
pm-147	4.47E-13	4.63E-12	1.34E-04	3.92E-05
sm-151	1.53E-11	2.21E-10	1.84E-03	1.19E-03
eu-152	5.48E-21	2.59E-19	2.47E-05	4.02E-06
eu-154	3.11E-18	3.29E-17	5.06E-06	7.24E-07
eu-155	8.18E-14	1.44E-12	2.25E-05	7.17E-06
tb-157	1.24E-22	1.32E-21	8.17E-13	1.63E-13
ho-166m	3.55E-22	5.14E-21	2.06E-12	4.07E-13

Isotope	Total Activity (Curies)			
	1h3v	2h3v	3h3v	5h3v
tl-204	2.72E-19	4.15E-15	3.78E-09	1.16E-09
tl-206	5.46E-14	2.21E-12	1.84E-05	1.01E-05
pb-205	8.56E-15	2.19E-13	1.32E-06	7.51E-07
bi-208	—	4.95E-12	1.92E-06	1.12E-06
bi-210m	5.46E-14	2.21E-12	9.21E-06	5.04E-06
th-231	1.51E-06	1.62E-06	3.51E-06	6.13E-06
th-234	3.29E-05	3.50E-05	7.84E-05	1.34E-04
pa-234m	3.29E-05	3.50E-05	7.84E-05	1.34E-04
u-234	3.19E-05	3.39E-05	7.56E-05	1.30E-04
u-235	1.51E-06	1.62E-06	3.51E-06	6.13E-06
u-238	3.29E-05	3.50E-05	7.84E-05	1.34E-04
np-239	—	—	6.99E-12	4.48E-14
pu-238	6.37E-26	6.95E-19	1.33E-06	2.13E-07
pu-239	1.44E-11	6.47E-10	2.38E-03	1.33E-03
pu-240	1.50E-20	6.02E-18	1.47E-04	2.82E-05
pu-241	1.02E-28	1.66E-24	8.50E-05	4.33E-06
pu-242	—	—	8.98E-11	1.93E-12
am-241	1.86E-29	3.22E-25	1.28E-05	8.01E-07
am-242	—	—	2.14E-08	3.67E-10
am-242m	—	—	2.15E-08	3.69E-10
am-243	—	—	6.99E-12	4.48E-14
cm-242	—	—	1.78E-08	3.03E-10
cm-243	—	—	6.09E-12	3.19E-14
cm-244	—	—	7.94E-13	1.35E-15
Totals	**1.73E-04**	**5.56E-04**	**5.95E+03**	**3.21E+03**

Table 52 Decayed Curie Contents for Reactor Tank, Aluminum Internals, Surface Deposits and Total System for C-Reactor System

Isotope	Total Activity (Curies)				
	Tank	Internals	Tank Deposits	Internal Deposits	System Totals
h-3	1.80E-03	1.34E-05	1.62E-02	3.97E-01	4.71E+01
c-14	5.56E+02	2.91E-03	3.55E-02	6.19E-01	7.40E+02
cl-36	3.96E-04	6.82E-16	1.74E+00	2.68E+01	2.85E+01
ar-39	9.47E-09	1.18E-16	8.82E-03	2.07E-01	2.35E-01
k-40	6.89E-20	—	2.51E-06	3.97E-05	2.67E-03
ca-41	—	2.48E-20	2.28E-02	3.77E-01	1.29E+00
fe-55	2.47E+03	4.32E+01	3.06E-01	4.37E+01	3.36E+03
co-60	3.00E+04	3.32E+00	6.32E-02	4.47E+00	4.07E+04
ni-59	1.64E+03	6.22E-12	7.55E-02	1.09E+00	2.28E+03
ni-63	1.69E+05	6.19E-01	8.87E+00	1.54E+02	2.29E+05
kr-85	8.76E-18	—	—	—	1.66E-02
rb-87	1.49E-09	—	—	—	2.66E-04
zr-93	4.16E-03	—	—	—	5.51E-03
nb-93m	2.15E+00	—	—	—	2.74E+00
nb-94	1.29E+01	—	—	—	1.71E+01
mo-93	3.18E+00	—	—	—	4.04E+00
tc-99	5.83E-01	—	—	1.91E-22	7.44E-01
ag-108	3.20E+00	—	1.90E-03	5.29E-02	4.51E+00
ag-108m	3.69E+01	—	2.19E-02	6.09E-01	5.20E+01
ag-109m	1.80E-05	—	4.46E-06	5.69E-04	5.95E-04
cd-109	1.80E-05	—	4.46E-06	5.69E-04	5.95E-04
cd-113m	6.72E-01	—	1.90E-01	2.74E+00	9.80E+00
sn-121	6.72E-01	—	1.42E-13	4.23E-11	8.87E-01
sn-121m	8.67E-01	—	1.83E-13	5.46E-11	1.15E+00
sb-125	1.57E-01	—	1.29E-24	5.92E-19	1.97E-01
te-125m	3.83E-02	—	3.15E-25	1.44E-19	4.81E-02
cs-134	4.43E-23	—	—	—	4.51E-05
cs-135	3.80E-05	—	—	—	6.06E-05
cs-137	1.75E+00	—	—	—	2.40E+00
ba-133	1.84E-09	—	—	—	1.75E-02
ba-137m	1.65E+00	—	—	—	2.26E+00
pm-145	2.65E-11	—	—	—	2.21E-04
pm-147	1.39E-03	—	—	—	2.10E-03
sm-151	5.16E-03	—	—	—	4.65E-02
eu-152	7.94E-05	—	—	—	2.22E+00
eu-154	9.36E-03	—	—	—	8.35E-02
eu-155	1.46E-03	—	—	—	2.11E-03
tb-157	1.06E-10	—	—	—	4.49E-05
ho-166m	8.98E-09	—	—	—	3.03E-04
tl-204	3.18E-08	—	—	—	2.03E-03
tl-206	3.00E-04	—	—	—	3.96E-04
pb-205	4.51E-05	—	—	—	1.02E-04
bi-208	3.36E-05	—	—	—	4.21E-05

Isotope	Total Activity (Curies)				
	Tank	Internals	Tank Deposits	Internal Deposits	System Totals
bi-210m	3.00E-04	—	—	—	3.96E-04
th-231	1.65E-07	—	—	—	3.65E-05
th-234	3.67E-05	—	—	—	8.54E-04
pa-234m	3.67E-05	—	—	—	8.54E-04
u-234	3.45E-05	—	—	—	8.22E-04
u-235	1.65E-07	—	—	—	3.65E-05
u-238	3.67E-05	—	—	—	8.54E-04
np-239	2.80E-04	—	—	—	2.80E-04
pu-238	9.52E-02	—	—	—	9.52E-02
pu-239	1.06E-02	—	—	—	3.37E-02
pu-240	4.89E-02	—	—	—	5.17E-02
pu-241	9.92E-01	—	—	—	9.95E-01
pu-242	1.18E-04	—	—	—	1.18E-04
am-241	1.17E-01	—	—	—	1.18E-01
am-242	1.63E-03	—	—	—	1.63E-03
am-242m	1.64E-03	—	—	—	1.64E-03
am-243	2.80E-04	—	—	—	2.80E-04
cm-242	1.35E-03	—	—	—	1.35E-03
cm-243	1.47E-04	—	—	—	1.47E-04
cm-244	2.94E-03	—	—	—	2.94E-03
Totals	**2.04E+05**	**4.71E+01**	**1.13E+01**	**2.35E+02**	**2.76E+05**

Table 53 Decayed Curie Contents for Regions 1V for C-Reactor System

	Total Activity (Curies)				
Isotope	**1h1v**	**2h1v**	**3h1v**	**4h1v**	**5h1v**
h-3	1.04E-13	1.08E-03	7.68E-03	4.67E+01	2.87E-03
c-14	3.34E-07	1.44E-06	6.44E-06	2.64E-02	4.62E-06
cl-36	5.89E-21	4.32E-08	3.22E-07	2.10E-03	1.57E-07
ar-39	—	2.81E-06	1.33E-04	1.94E-02	7.43E-05
k-40	—	8.02E-05	3.07E-04	1.91E-03	2.18E-04
ca-41	—	1.16E-05	1.37E-04	8.93E-01	6.51E-05
fe-55	2.45E-06	9.90E-06	1.39E-04	5.23E-01	2.29E-05
co-60	2.53E-05	1.39E-04	5.29E-04	1.80E+00	2.15E-04
ni-59	1.26E-06	4.56E-06	1.24E-05	8.37E-02	1.24E-05
ni-63	1.17E-04	4.26E-04	1.14E-03	7.72E+00	1.12E-03
kr-85	3.78E-11	3.59E-12	1.77E-10	2.37E-08	7.65E-11
rb-87	8.04E-19	8.15E-06	3.12E-05	1.93E-04	2.21E-05
zr-93	2.76E-12	1.15E-10	1.13E-09	4.18E-06	4.71E-10
nb-93m	4.10E-09	1.97E-08	4.79E-07	3.11E-04	2.18E-07
nb-94	1.72E-08	7.02E-08	1.40E-06	3.92E-03	6.51E-07
mo-93	6.18E-09	2.97E-08	7.18E-07	4.56E-04	3.14E-07
tc-99	1.15E-09	5.52E-09	1.32E-07	8.69E-05	5.69E-08
ag-108	2.54E-09	1.65E-08	8.56E-08	3.19E-04	4.97E-08
ag-108m	2.93E-08	1.89E-07	9.85E-07	3.65E-03	5.72E-07
ag-109m	8.45E-15	5.19E-14	3.54E-13	3.51E-10	8.67E-14
cd-109	4.22E-15	2.59E-14	3.54E-13	3.51E-10	8.67E-14
cd-113m	4.69E-08	2.56E-07	1.22E-06	2.71E-03	6.45E-07
sn-121	7.52E-10	3.28E-09	4.45E-08	1.01E-04	2.14E-08
sn-121m	9.69E-10	4.24E-09	5.75E-08	1.30E-04	2.76E-08
sb-125	2.98E-10	1.57E-09	2.89E-08	1.61E-05	5.88E-09
te-125m	7.30E-11	3.82E-10	7.04E-09	3.94E-06	1.44E-09
cs-134	7.55E-19	1.88E-09	2.71E-08	4.43E-05	4.02E-09
cs-135	4.33E-14	3.65E-17	1.84E-15	1.58E-11	1.07E-15
cs-137	1.23E-09	1.48E-08	8.38E-08	9.28E-21	2.12E-29
ba-133	1.20E-22	4.60E-07	4.13E-06	1.75E-02	1.31E-06
ba-137m	1.16E-09	1.40E-08	7.91E-08	8.77E-21	3.95E-08
pm-145	1.56E-25	5.30E-09	4.40E-08	2.21E-04	1.64E-08
pm-147	1.51E-12	3.06E-16	7.09E-15	4.40E-12	1.34E-15
sm-151	5.04E-11	4.80E-07	3.99E-06	2.22E-02	1.72E-06
eu-152	7.10E-19	5.06E-05	3.52E-04	2.22E+00	1.35E-04
eu-154	1.65E-17	2.28E-06	2.52E-05	7.40E-02	6.77E-06
eu-155	4.97E-13	1.44E-08	1.79E-07	3.97E-04	3.61E-08
tb-157	3.98E-22	2.42E-09	4.52E-08	4.48E-05	1.42E-08
ho-166m	1.12E-21	1.02E-08	1.48E-07	3.03E-04	5.19E-08
tl-204	5.75E-17	6.39E-08	6.58E-07	2.03E-03	1.31E-07
tl-206	2.21E-13	9.15E-13	2.42E-12	3.38E-09	2.64E-12
pb-205	3.01E-14	3.65E-13	2.90E-12	3.03E-07	1.38E-12
bi-208	2.67E-14	1.18E-13	1.18E-12	1.01E-10	2.07E-12
bi-210m	2.21E-13	9.15E-13	2.42E-12	3.38E-09	2.64E-12
th-231	7.19E-08	2.88E-07	8.33E-07	4.96E-06	6.86E-07

Isotope	Total Activity (Curies)				
	1h1v	2h1v	3h1v	4h1v	5h1v
th-234	1.56E-06	6.24E-06	1.80E-05	1.08E-04	1.49E-05
pa-234m	1.56E-06	6.24E-06	1.80E-05	1.08E-04	1.49E-05
u-234	1.51E-06	6.05E-06	1.75E-05	1.05E-04	1.44E-05
u-235	7.19E-08	2.88E-07	8.33E-07	4.96E-06	6.86E-07
u-238	1.56E-06	6.24E-06	1.80E-05	1.08E-04	1.49E-05
np-239	—	—	—	9.49E-23	—
pu-238	1.77E-20	7.90E-19	7.13E-17	7.83E-12	2.79E-17
pu-239	6.08E-11	8.27E-10	8.79E-09	1.86E-05	3.64E-09
pu-240	4.10E-18	1.67E-16	3.26E-15	7.67E-09	9.23E-16
pu-241	3.47E-24	4.86E-22	3.49E-20	2.71E-11	3.98E-21
pu-242	—	—	2.02E-31	1.74E-19	—
am-241	4.30E-25	5.94E-23	4.32E-21	3.57E-12	6.33E-22
am-242	—	—	3.79E-29	3.70E-17	—
am-242m	—	2.59E-31	3.96E-29	3.73E-17	4.27E-30
am-243	—	—	—	9.49E-23	—
cm-242	—	—	3.13E-29	3.06E-17	—
cm-243	—	—	—	4.21E-23	—
cm-244	—	—	—	5.26E-26	—
Totals	**1.53E-04**	**1.85E-03**	**1.06E-02**	**6.01E+01**	**4.84E-03**

Table 54 Decayed Curie Contents for Regions 2V for C-Reactor System

	Total Activity (Curies)				
Isotope	**1h2v**	**2h2v**	**3h2v**	**4h2v**	**5h2v**
h-3	2.76E-13	1.38E-03	4.97E-13	5.22E-05	1.11E-13
c-14	8.66E-07	6.13E-07	1.60E-06	1.43E+02	5.42E-07
cl-36	1.59E-20	5.88E-08	1.04E-16	3.32E-06	1.43E-17
ar-39	—	3.35E-05	1.26E-27	3.25E-12	1.04E-28
k-40	—	1.08E-04	—	—	—
ca-41	—	1.59E-05	—	—	—
fe-55	4.88E-06	8.82E-06	1.43E-03	6.04E+02	5.24E-05
co-60	7.54E-05	9.12E-05	2.03E-04	8.26E+03	1.92E-05
ni-59	3.03E-06	1.22E-06	5.26E-06	5.02E+02	1.80E-06
ni-63	2.83E-04	1.11E-04	4.76E-04	4.64E+04	1.58E-04
kr-85	1.01E-10	4.29E-11	1.98E-10	1.29E-02	4.09E-11
rb-87	2.08E-18	1.09E-05	4.17E-18	3.28E-10	1.43E-18
zr-93	8.33E-12	2.73E-10	2.88E-11	1.03E-03	7.10E-12
nb-93m	1.43E-08	9.72E-08	1.06E-07	3.38E-01	2.14E-08
nb-94	3.70E-08	2.62E-07	1.79E-07	3.08E+00	3.66E-08
mo-93	2.16E-08	1.45E-07	1.60E-07	5.00E-01	3.04E-08
tc-99	4.00E-09	2.67E-08	2.82E-08	9.48E-02	5.11E-09
ag-108	7.45E-09	1.73E-08	2.25E-08	9.63E-01	5.42E-09
ag-108m	8.55E-08	1.99E-07	2.59E-07	1.10E+01	6.25E-08
ag-109m	3.86E-14	7.84E-14	2.29E-13	1.82E-06	5.39E-15
cd-109	1.93E-14	7.84E-14	2.29E-13	1.82E-06	5.39E-15
cd-113m	1.56E-07	2.44E-07	6.30E-07	3.69E+00	9.58E-08
sn-121	2.15E-09	8.29E-09	1.12E-08	1.57E-01	2.10E-09
sn-121m	2.76E-09	1.06E-08	1.44E-08	2.03E-01	2.71E-09
sb-125	1.23E-09	5.67E-09	8.55E-09	2.29E-02	2.70E-10
te-125m	3.01E-10	1.39E-09	2.09E-09	5.63E-03	6.57E-11
cs-134	2.14E-18	7.34E-09	4.61E-18	7.16E-07	1.94E-19
cs-135	1.13E-13	4.54E-16	2.42E-13	1.75E-05	8.30E-14
cs-137	3.23E-09	1.48E-08	6.88E-09	5.07E-01	1.98E-09
ba-133	3.21E-22	9.12E-07	5.82E-22	4.09E-12	1.18E-22
ba-137m	3.05E-09	1.40E-08	6.51E-09	4.79E-01	1.87E-09
pm-145	6.37E-25	9.12E-09	6.15E-24	8.45E-13	1.21E-24
pm-147	4.27E-12	1.90E-15	9.35E-12	5.28E-04	5.33E-13
sm-151	1.32E-10	8.29E-07	3.25E-10	1.39E-02	1.06E-10
eu-152	3.19E-18	6.18E-05	9.33E-17	3.43E-04	1.09E-17
eu-154	4.47E-17	6.24E-06	1.46E-16	1.09E-04	1.93E-17
eu-155	1.41E-12	4.64E-08	4.61E-12	1.96E-04	5.06E-13
tb-157	1.03E-21	1.36E-08	1.86E-21	1.36E-11	6.06E-22
ho-166m	2.92E-21	4.14E-08	7.18E-21	3.56E-11	2.46E-21
tl-204	4.01E-16	1.55E-07	1.34E-14	1.88E-08	1.17E-15
tl-206	7.56E-13	2.52E-13	3.42E-12	7.11E-05	7.38E-13
pb-205	9.07E-14	6.66E-13	3.28E-13	5.34E-05	8.30E-14
bi-208	1.79E-13	1.12E-13	7.26E-12	2.82E-06	2.60E-12
bi-210m	7.56E-13	2.52E-13	3.42E-12	7.11E-05	7.38E-13
th-231	1.06E-07	2.77E-07	1.41E-08	1.33E-05	7.67E-09
th-234	2.30E-06	6.02E-06	3.07E-07	3.12E-04	1.66E-07

	Total Activity (Curies)				
Isotope	**1h2v**	**2h2v**	**3h2v**	**4h2v**	**5h2v**
pa-234m	2.30E-06	6.02E-06	3.07E-07	3.12E-04	1.66E-07
u-234	2.23E-06	5.84E-06	2.98E-07	2.98E-04	1.61E-07
u-235	1.06E-07	2.77E-07	1.41E-08	1.33E-05	7.67E-09
u-238	2.30E-06	6.02E-06	3.07E-07	3.12E-04	1.66E-07
np-239	—	—	—	1.16E-09	—
pu-238	2.28E-19	1.06E-17	1.82E-16	1.60E-05	3.02E-17
pu-239	2.15E-10	2.31E-09	1.01E-09	1.67E-02	2.09E-10
pu-240	2.50E-17	4.35E-16	1.43E-15	2.50E-03	1.96E-16
pu-241	5.17E-23	3.63E-21	1.04E-19	2.97E-03	3.62E-21
pu-242	—	—	2.36E-30	6.94E-09	7.88E-32
am-241	6.26E-24	4.56E-22	1.26E-20	3.95E-04	7.08E-22
am-242	—	2.06E-30	4.76E-28	1.23E-06	1.36E-29
am-242m	1.56E-32	2.37E-30	4.78E-28	1.24E-06	1.36E-29
am-243	—	—	—	1.16E-09	—
cm-242	—	1.71E-30	3.92E-28	1.02E-06	1.13E-29
cm-243	—	—	—	5.73E-10	—
cm-244	—	—	—	2.24E-10	—
Totals	**3.76E-04**	**1.85E-03**	**2.11E-03**	**5.60E+04**	**2.34E-04**

Table 55 Decayed Curie Contents for Regions 3V for C-Reactor System

	Total Activity (Curies)			
Isotope	**1h3v**	**2h3v**	**3h3v**	**5h3v**
h-3	3.93E-13	1.23E-12	6.20E-06	6.09E-06
c-14	1.16E-06	3.76E-06	1.71E+01	2.39E+01
cl-36	1.78E-21	1.86E-20	1.12E-07	1.95E-07
ar-39	—	—	3.17E-14	7.04E-14
k-40	—	—	—	—
ca-41	—	—	—	—
fe-55	7.98E-06	2.77E-05	1.41E+02	5.40E+01
co-60	1.16E-04	4.63E-04	1.52E+03	9.16E+02
ni-59	4.09E-06	1.30E-05	6.03E+01	8.39E+01
ni-63	3.84E-04	1.20E-03	5.68E+03	7.57E+03
kr-85	1.45E-10	4.61E-10	1.92E-03	1.75E-03
rb-87	2.80E-18	9.15E-18	3.98E-11	5.57E-11
zr-93	1.14E-11	5.33E-11	1.34E-04	1.87E-04
nb-93m	2.07E-08	1.61E-07	9.64E-02	1.50E-01
nb-94	5.20E-08	3.11E-07	4.54E-01	6.43E-01
mo-93	3.18E-08	2.45E-07	1.47E-01	2.16E-01
tc-99	5.87E-09	4.52E-08	2.72E-02	3.98E-02
ag-108	1.03E-08	4.48E-08	1.25E-01	1.69E-01
ag-108m	1.18E-07	5.16E-07	1.43E+00	1.94E+00
ag-109m	8.09E-14	7.73E-13	1.02E-06	3.22E-07
cd-109	4.04E-14	3.87E-13	1.02E-06	3.22E-07
cd-113m	2.29E-07	1.17E-06	1.32E+00	1.18E+00
sn-121	3.09E-09	1.88E-08	2.51E-02	3.30E-02
sn-121m	3.98E-09	2.43E-08	3.22E-02	4.25E-02
sb-125	2.16E-09	1.78E-08	1.23E-02	4.98E-03
te-125m	5.29E-10	4.35E-09	3.00E-03	1.21E-03
cs-134	3.62E-18	1.36E-17	6.82E-08	3.26E-08
cs-135	1.51E-13	4.99E-13	2.12E-06	2.96E-06
cs-137	4.44E-09	1.44E-08	6.50E-02	7.86E-02
ba-133	4.62E-22	1.46E-21	2.22E-13	2.73E-13
ba-137m	4.20E-09	1.36E-08	6.14E-02	7.43E-02
pm-145	8.93E-25	5.94E-24	4.10E-14	5.58E-14
pm-147	6.98E-12	2.49E-11	1.26E-04	4.75E-05
sm-151	1.78E-10	5.96E-10	2.29E-03	2.97E-03
eu-152	3.98E-19	4.33E-18	2.13E-05	2.27E-05
eu-154	6.38E-17	2.02E-16	5.26E-06	5.51E-06
eu-155	2.11E-12	7.38E-12	3.38E-05	1.95E-05
tb-157	1.39E-21	4.50E-21	6.31E-13	1.08E-12
ho-166m	3.91E-21	1.31E-20	1.53E-12	2.72E-12
tl-204	4.78E-16	5.87E-15	4.57E-09	3.18E-09
tl-206	1.06E-12	5.92E-12	1.00E-05	1.42E-05
pb-205	1.24E-13	5.77E-13	1.46E-06	2.06E-06

Isotope	Total Activity (Curies)			
	1h3v	2h3v	3h3v	5h3v
bi-208	1.62E-13	2.24E-12	1.83E-06	3.87E-06
bi-210m	1.06E-12	5.92E-12	1.00E-05	1.42E-05
th-231	1.71E-06	1.63E-06	5.96E-06	6.48E-06
th-234	3.71E-05	3.53E-05	1.32E-04	1.44E-04
pa-234m	3.71E-05	3.53E-05	1.32E-04	1.44E-04
u-234	3.60E-05	3.42E-05	1.27E-04	1.39E-04
u-235	1.71E-06	1.63E-06	5.96E-06	6.48E-06
u-238	3.71E-05	3.53E-05	1.32E-04	1.44E-04
np-239	—	—	1.75E-12	5.79E-12
pu-238	1.75E-20	1.02E-18	8.06E-07	2.07E-06
pu-239	3.02E-10	1.75E-09	2.62E-03	3.68E-03
pu-240	2.93E-18	5.52E-17	1.08E-04	1.94E-04
pu-241	5.53E-25	6.40E-23	5.17E-05	8.56E-05
pu-242	—	—	2.96E-11	8.63E-11
am-241	6.38E-26	7.33E-24	5.79E-06	1.44E-05
am-242	—	—	5.61E-09	1.73E-08
am-242m	—	—	5.64E-09	1.74E-08
am-243	—	—	1.75E-12	5.79E-12
cm-242	—	—	4.64E-09	1.43E-08
cm-243	—	—	9.01E-13	2.15E-12
cm-244	—	—	1.51E-13	4.87E-13
Totals	**6.64E-04**	**1.85E-03**	**7.42E+03**	**8.65E+03**