
REVISED RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

APR1400 Design Certification

Korea Electric Power Corporation / Korea Hydro & Nuclear Power Co., LTD

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Question No. 19-10

10 CFR 52.47(27) requires that a standard design certification applicant provide a description of the design specific PRA and the results. SRP Chapter 19, Revision 3, states "The staff will determine that the applicant has performed a PRA-based SMA to determine the seismic capacity of the plant and for each sequence that may lead to core damage or large release." Thus, the staff requests KHNP to update the DCD Section 19.1.6 to provide a discussion on how the seismic margins approach was applied to low power and shutdown conditions. Specifically, the staff is requesting the applicant to update Section 19.1.6 of the DCD to include the seismic cutsets and the sequence HCLPF capacities. The staff also requests KHNP to update Section 19.1.6 of the DCD to include the dominant mixed cutsets containing seismic failures and random failures or operator actions.

Response - (Rev. 2)

The PRA-based seismic margin analysis (SMA) for low-power and shutdown (LPSD) conditions was performed. Both at-power and LPSD SMA results reflect the latest PRA model updates. Details of the LPSD PRA-based SMA are documented in DCD 19.1.6.5, "Seismic LPSD Risk Evaluation" and include evaluation of core damage as well as Level 2 sequences. Attachment 1 provides the DCD markups summarizing how the seismic margins approach was applied to low power and shutdown conditions. Results of the APR1400 PRA-based SMA under LPSD conditions includes the seismic cutsets and the sequence HCLPF capacities, as well as assessment of random failures and operator actions. Sequence level cutsets for the various plant operating states (POS) are provided in the accompanying documentation representing the plant-level HCLPF for Level 1 and Level 2 results. In order to provide the modeling information, the detail information for event tree, fault tree for LPSD PRA-based SMA are provided in Attachments 2 and 3. In addition, Attachment 4 provides a cross-walk to how the PRA-based SMA under LPSD conditions was developed to follow NRC Interim Staff Guidance on Implementation of a Probabilistic Risk Assessment-Based Seismic Margin Analysis for New

Reactors, DC/COL-ISG-020.

Impact on DCD

The previous DCD markup which is related to DCD Section 19.1.6.5 will be withdrawn. The section will be superseded as discussed above, and provided in Attachment 1.

Impact on PRA

There is no impact on the PRA.

Impact on Technical Specifications

There is no impact on the Technical Specifications.

Impact on Technical/Topical/Environmental Reports

There is no impact on any Technical, Topical, or Environmental Report.

DCD 19.1.6.5 Seismic LPSD Risk Evaluation

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19.1.6.5 Seismic LPSD Risk Evaluation

This subsection describes the seismic risk evaluation including the results of the evaluation. The scope of this analysis is LPSD operation.

19.1.6.5.1 Description of the Seismic Risk Evaluation

The seismic margin method was applied to estimate the seismic margin and accident sequences for APR1400. The seismic margin for the APR1400 is evaluated by using PRA-based SMA. This methodology satisfies the recommendation of SECY-93-087 (Reference 8), as modified and approved by EPRI 30020007009 (Reference 77), for a seismic risk evaluation. PRA-based SMA identifies potential vulnerabilities and demonstrates seismic margins beyond the design basis safe shutdown earthquake (SSE). The capacity of components required to bring the plant to safe and stable conditions is assessed. The SSCs identified as important to seismic risk are addressed. This approach for low power and safe shutdown (LPSD) PRA-based SMA is generally followed as was used for the at-power operation PRA-based SMA described in section 19.1.5.1.1. The following approach and considerations for LPSD conditions are as follows:

a. Selection of review level earthquake

The selection of the review level earthquake for the LPSD PRA-based SMA is the same as that for the at-power PRA-based SMA as described in section 19.1.5.1.1(a).

b. Development of seismic equipment list

The seismic equipment list is developed from the at-power seismic equipment list (SEL). Then the shutdown conditions and evolutions were reviewed to identify plant structures, systems and component (SSCs) which could impact the plant should a seismic event occur during LPSD conditions.

c. Identification of seismic initiating event category

Initiating events due to a seismic event are identified based on the LPSD internal events PRA result. However, there are some major differences between seismic and internal events for the purpose of identifying the initiating event category as described in section 19.1.5.1.1(c).

d. Development of system models

The LPSD PRA-based SMA models are developed from the LPSD internal events PRA model to include the important accident sequences. This development is identical to that described for at-power PRA-based SMA in section 19.1.5.1.1(d).

e. Fragility analysis

Fragility analysis methodology is identical to that used for at-power PRA-based SMA as described in section 19.1.5.1.1(e).

f. Evaluation for the plant seismic capacity

The methodology for evaluation of plant seismic capacity is identical to that used for at-power PRA-based SMA as described in section 19.1.5.1.1(f).

g. Demonstration of seismic margin in the design

This step is identical to that used for at-power PRA-based SMA as described in section 19.1.5.1.1(g).

19.1.6.5.2 Development of Seismic Equipment List

The SEL provides a documented list of the plant SSCs that could be used to respond to an earthquake or mitigate potential reactor plant damage initiated by a seismic event. The design certification SEL then is used to develop the SMA systems logic model (i.e., event trees and fault trees).

The LPSD SEL was developed from the at-power PRA-based SMA SEL. See section 19.1.5.1.1.1 for development of the at-power SEL. Because all equipment modeled in the LPSD PRA is also modeled in the at-power PRA, use of the at-power SEL provides much of the needed information. Additionally, the shutdown conditions and evolutions were reviewed to identify additional SSCs which could impact the plant should a seismic event occur during LPSD.

While the objectives of the LPSD internal events PRA and LPSD PRA-based SMA are similar, there are differences between the SSCs included in each of the models. As a result, not all SSCs included in the LPSD internal events PRA model are included in the SEL. For example, some SSCs are not modeled in the LPSD PRA but must be considered in the PRA-based SMA and included on the SEL. Examples include distribution systems such as piping, cable trays, ventilation ducts, refueling equipment, and structural items such as masonry block walls that could fail and damage nearby safety equipment.

The following additional assumptions apply to the LPSD PRA-based SMA

- a. For the purpose of identifying the plant-level HCLPF in LPSD PRA-based SMA, Mode 5 is used in the quantification. POSs in Mode 5 consider the largest set of SSCs in mitigation and the set of SSCs considered is very similar to that needed to mitigate

core damage or radioactive material release in other POSs and, therefore, is considered representative of the equipment needed to determine the plant-level HCLPF. Two conditions could occur that significantly differ with respect to accident mitigation than that modeled in Mode 5. The first is when there is a high water level in the reactor cavity which is expected during the majority of time spent in Mode 6. With this volume of water, it would take a very long time to heat up and boil off enough water to result in loss of core cooling and subsequent core damage thereby presenting less of a challenge to plant equipment and potentially masking components that could be important to determining the plant-level HCLPF. The second condition that is different from the accident progression modeled for Mode 5 is when nozzle dams are installed. As a result, seismic-related insights from quantifying the SMA for Mode 5 are considered representative for all LPSD POSs.

- b. The large, medium, and small LOCA scenarios are not considered controlling LOCA events for Mode 5 operation. For Large, medium and small LOCA, almost all the same equipment and operator actions are required to mitigate the accident compared to those of at-power PRA-based SMA. Because sufficient risk insight is gained from at-power PRA-based SMA result about large, medium and small LOCA, it is not considered necessary to develop the detailed logic models to gain risk insight for the LOCAs during LPSD period.
- c. The failure of nozzle dam(s) due to the seismic induced event does not impact the inventory of RCS and function of shutdown cooling system during LPSD.
- d. The containment hatch is assumed to be open for all scenarios in plant operating states POS 3B & 4A and closed for all scenarios in POS 4B to 12A. Since the containment hatch is open for all scenarios in POS 3B & 4A all core damage is assumed to go directly to Large Release (LR). No level 2 modeling is necessary for POS 3B & 4A level 2 failure since LR is assumed and direct.
- e. The Containment structure is assumed to have the same HCLPF capacity in LPSD configurations as it does for the at-power fragility calculation. That is, collapse of the structure is not affected by whether or not the equipment hatch is removed or installed with four bolts. Additionally, failure of the containment to provide an effective fission product boundary during LPSD conditions when the equipment hatch installed using four bolts has the same fragility as for at-power conditions when the equipment hatch is installed with all bolts.

19.1.6.5.3 Plant Operational States

For the purposes of identifying the plant-level HCLPF in the LPSD PRA-based SMA, Mode 5 is used in the quantification. POSs in Mode 5 consider the largest set of SSCs in mitigation and the set of SSCs considered is very similar to that needed to mitigate core damage or release in other POSs and, therefore, is considered representative of the equipment needed to determine the plant-level HCLPF. Two conditions could occur that are significantly different with respect to accident mitigation than that modeled for Mode 5. The first is when there is a high water level in the reactor cavity which is expected during the majority of time spent in Mode 6. With this volume of water, it would take a very long time to heat up and boil off enough water to result in loss of core cooling and subsequent core damage thereby presenting less of a challenge to plant equipment and potentially masking components that could be important to determining the plant-level HCLPF. The second condition that is different from the accident progression modeled for Mode 5 is when nozzle dams are installed. Seismically-induced failure of nozzle dams would not impact to the plant operation which is discussed in assumption in the 19.1.6.5.2 (c). As a result, seismic-related insights from quantifying the SMA for Mode 5 are considered representative for all LPSD POSs.

The Plant Operating States (POS) listed in table 19.1-41B are correlated to Mode 5. These POS will be evaluated for the LPSD PRA-based SMA. POS 12B is very similar to POS 4A with normal RCS inventory and sub-cooling. However, the thermal-hydraulic analysis shows that the time to core damage is more than 24 hours after a loss of SCS because the decay heat of POS 12B is so low. Therefore, POS 12B has been screened out.

19.1.6.5.4 Development of System Models

System logic models development methodology is same as that of at-power PRA-based SMA described in the section 19.1.5.1. The developed model was for seismic induced initiating events which were identified and shown in the seismic induced initiating event tree illustrated in Figure 19.1-209.

19.1.6.5.4.1 Direct Core Damage (S-DMG)

A seismic event that causes significant structural failure is assumed to preclude equipment operation and operator actions needed to prevent core damage because structural failure could cause widespread equipment failures. Since structural failures were not explicitly included in the internal events model, a new fault tree for top event S-DMG was created to model seismic failure of structures. Failures included in this fault tree include the following:

- Reactor Containment

Two separate failures were considered in modeling seismic structural failure of the reactor containment, failure of the external containment structure and failure on the internal containment structure.

- Auxiliary Building

Seismic structural failure of the Auxiliary Building is modeled as direct core damage.

- Nuclear Island

Seismic induced sliding of the Nuclear Island is modeled as direct core damage.

- Turbine Building

Seismic structural failure of the Turbine Building is modeled as direct core damage.

- Compound Building

Seismic structural failure of the Compound Building is modeled as direct core damage.

- Containment Hatch (Open & Stowed)

Seismic structural failure of the open and stowed Containment Hatch is modeled as direct core damage. This failure is valid only for POS-3B and 4A during the containment hatch is open and stowed.

A seismic event that causes significant RCS component failure is assumed to lead to excessive LOCA which cannot be accommodated by the emergency core cooling system (ECCS) thus assumed to lead to direct core damage. These seismic induced failures would also be included in the S-DMG. Failures included in this fault tree include the following:

- Reactor Pressure Vessel (RPV)

Seismic induced column support failure of the RPV is modeled as direct core damage.

- Reactor Pressure Vessel Internal Failure

Seismic induced core support barrel lower flange failure of the RPV internal is modeled as direct core damage.

- Steam Generator (SG)

Seismic induced anchor failure of snubber lever support assembly of the Steam Generator is modeled as direct core damage.

- Pressurizer

Seismic induced pressurizer skirt support failure is modeled as direct core damage.

- Reactor Coolant Pump (RCP)

Seismic induced RCP upper horizontal column support failure is modeled as direct core damage.

- Reactor Vessel Head

Seismic induced Rx Vessel Failure which is open and stowed is modeled as direct core damage. This failure is valid only from POS-6 and POS-10 during the Rx vessel is open and stowed.

S-DMG is assumed to lead to containment failure upon the seismic event. Thus it is assumed to lead to large release.

19.1.6.5.4.2 ISLOCA (S- ISLOCA)

While SCS is operating, the seismic induced failure of components in the SCS line connected to the RCS outside containment building is assumed to lead to ISLCOA. Failures included in this fault tree include the following:

- Shutdown Cooling Pump
- Shutdown Cooling Heat Exchanger
- Shutdown Cooling Pump Mini-Flow Heat Exchanger

S- ISLOCA is conservatively assumed to lead to core damage and thus it is assumed to lead to large release.

19.1.6.5.4.3 Station Blackout (S-SBO)

As described in the section 19.1.5.1, LOOP is assumed with the occurrence of seismic event and off-site power recovery is not credited in the seismic event. Therefore, the failure of EDGs will lead to the station blackout (SBO) without off-site power recovery, consequently leading to direct core damage. The seismic induced failures of the equipment below will lead to seismically induced SBO.

- Emergency Diesel Generators (EDG)
- Emergency Diesel Fuel Oil transfer pump
- Starting Air Tank
- Diesel Fuel Oil Day Tank
- Diesel Fuel Oil Storage Tank
- Silencer
- Air Intake Filter
- Lube Oil Water Heat Exchanger
- Motor Driven Fuel Oil Feed Pump
- EDG Room Emergency Exhaust Fan
- 125V DC Control Center
- 4.16kV MCSG
- Batteries & Racks

S-SBO is assumed to lead to containment isolation failure due to the loss of all electrical power before or at the time of core damage.

19.1.6.5.4.4 Loss of All Instrumentation and Control (S-IC)

Mitigation of an accident requires that the operators have adequate indication available to progress through the emergency operation guidelines and operate the equipment necessary to

control the plant. However, plant instrumentation and controls (I&C) are not explicitly modeled in the internal events PRA. Loss of instrumentation and control is assumed to result directly in core damage.

Of the equipment on the SEL, Table 19.1-42A, the ESF-CCS GC, ESF-CCS LC, and plant protection system (PPS) cabinets are needed to route and process signals and indications needed for the operators to control plant parameters and equipment. The cabinets all are located on the 156-foot elevation and have the same parameters for fragility values. Specific fragility assessments of the cabinets were not performed, and all cabinets were assigned a HCLPF of 0.5g and seismic failure of all the cabinets was modeled with a single, correlated failure.

The 480V MCC cabinets are located on various building elevations, but specific fragility assessment of the cabinets were not performed. Loss of all 480V MCC is conservatively modeled as one correlated event which leads to total loss of I&C. In addition to the seismic failure of the cabinets, loss of all 120 VAC instrumentation power also could cause a total loss of I&C. Loss of all 120 VAC is modeled as failure of the inverter and regulating transformer on each of the four 120 VAC power channels.

Though the failure of the equipment below does not directly cause loss of instrumentation & control, it will cause numerous component failures. Thus the failure of the equipment below will cause similar circumstances as S-IC with respect to accident mitigation. Therefore the equipment failures below are assumed to cause the initiating event as S-IC.

- Main Control Room (MCR) Safety Consoles
- 125V DC Battery Chargers
- 480V Load Center
- 480V Motor Control Center (MCC)

S-IC is assumed to lead to containment isolation failure due to the loss of all I&Cs before or at the time of core damage.

19.1.6.5.4.5 Total Loss of Component Cooling Water (S-TLOCCW)

Seismic induced failures of equipment which are lead to prompt or delayed loss of total CCW or total essential service water (ESW) is defined as seismic induced total loss of component cooling water. Over time, the loss of ESW and CCW are essentially the same with respect to accident mitigation under seismic event. This initiating event is assumed to lead to direct core damage due to the loss of all cooling water over time. The seismic induced failures of the SSCs below will cause this initiating event.

- Essential Service Water Intake Structure (ESW IS)
- CCW Heat Exchanger (CCW HX) Building
- Essential Service Water Pump
- CCW Heat Exchangers
- CCW Pump
- CCW Surge Tank
- Essential Chilled Water Pumps
- Essential Chillers
- ECW Compression Tank
- ECW Air Separator
- Essential Chilled Water System Control Panel
- AFWP Room Cubicle Cooler
- CCWP Room Cubicle Cooler
- SI Room Cubicle Cooler
- SC Pump & Mini-flow Heat Exchanger Room Cubicle Cooler
- Mech. Pen. Room Cubicle Cooler
- CS Pump Room Cubicle Cooler

- Auxiliary Charging Pump Room Cubicle Cooler
- Charging Pump Room Cubicle Cooler
- Electrical Penetration Room Area Cubicle Cooler
- I&C Equipment Room Cubicle Cooler
- EDG Room Emergency Cubicle Cooler
- EDG Room Emergency Cubicle Cooler
- Essential Chiller & Pump Cubicle Cooler
- ESW Pump Room Supply Fan

Due to the unavailability of ESFAS and a lot of maintenance tasks during the LPSD period, seismic induced direct core damage initiator is assumed to directly lead to containment isolation failure.

19.1.6.5.4.6 Loss of Coolant Accidents

Non-recoverable LOCA is unique and representative during LPSD period due to the failure of CVCS let-down line outside containment. Because the most important mitigation function for the initiator is the LOCA path isolation, all the core damage sequences for this initiator is conservatively assumed to lead to containment failure.

19.1.6.5.4.7 Loss of Off-Site Power (S-LOOP)

Seismic induced LOOP is assumed for any earthquake events during LPSD period, should any SSCs damage not occur which lead to initiating event defined above. For POSs 4B through 12A, containment failure model for this initiator is same as the LPSD internal event.

19.1.6.5.4.8 Seismic Event Additions to LPSD Internal Events Fault Trees

The methodology and assumptions for seismic event additions into the fault tree logic is same as that of at-power PRA-based SMA described in the section 19.1.5.1.

19.1.6.5.5 Seismic Fragility Analysis

With the exception of the additional assumptions below, the seismic fragility analysis for the LPSD is the same as that for the at-power PRA-based SMA. See subsection 19.1.5.1.1.4.9 for the at-power seismic fragility analysis.

The additional assumptions for the LPSD PRA-based SMA fragility analysis are as follows.

- a. The stresses and loads on the NSSS components are assumed to be higher during full power operation than they are in mode 5. It is assumed that the HCLPF capacities calculated for the NSSS components for full power conditions are conservative for plant conditions in Mode 5.
- b. The containment structure is assumed to have the same HCLPF capacity in shutdown configuration as it does for the full power fragility calculation. That is, collapse of the structure is not affected by whether or not the equipment hatch is removed or installed with four bolts. Additionally, failure of the containment to provide an effective fission product boundary during LPSD conditions when the equipment hatch installed using four bolts has the same fragility as for at-power conditions when the equipment hatch is installed with all bolts.
- c. A portion of the CVCS let-down line located outside containment (between the containment and auxiliary buildings) are assumed to fail due to anticipated building displacement differential. If the failure is occurred by a seismic event, it is assumed that the isolation valve and the mitigation systems which are not identical from the seismic response are assumed not to be correlated.
- d. When the shutdown cooling system outside containment is failed, the isolation valve is conservatively assumed to be failed. Therefore no SSCs of mitigation are assumed to be available.

19.1.6.5.6 Results from the Seismic Risk Evaluation Design

19.1.6.5.6.1 Seismic Equipment List

The SEL is developed from the internal events PRA model and it provides a documented list of the plant SSCs that could be used to respond to an earthquake or mitigate potential reactor plant damage initiated by a seismic event. The plant has a number of systems that are available for safe shutdown after a seismic event. In selecting the systems, the following potential seismic initiating event scenarios were considered:

- a. Direct core damage scenarios such as building collapse or RCS component catastrophic failure (S-DMG)
- b. Interfacing Systems LOCA (S-ISLOCA)
- c. Station blackout (S-SBO)
- d. Loss of all I&C (S-IC)
- e. Total Loss of Component Cooling Water (S-TLOCCW)
- f. Non-Recoverable LOCA (S-NRLOCA)
- g. Loss of offsite power (S-LOOP)

As with other PRA-based SMAs, the analysis considers equipment needed to supply offsite power to be of very low seismic capacity. If offsite power is available after an earthquake, then the earthquake was relatively mild and such events would cause very little damage, with virtually, all of the safety systems would be available for accident mitigation following such a mild event.

Initiating events with partial failure of support system such as loss of one train DC power or loss of one train cooling water are not considered as seismically induced initiators because all the same redundant components in the support system will fail simultaneously by earthquake due to the assumed full correlated failure. For example, the correlated simultaneous failures of multiple 4kV AC buses by earthquake are considered as seismic event specific SBO. Therefore, for all the initiators by the partial loss of a supporting system, seismic event initiators with total loss of a supporting system should be considered. The examples are loss of one 4kV AC bus and loss of one train safety-related DC bus.

Table 19.1-41A lists the systems that were evaluated for the LPSD PRA-based SMA with their associated plant designators. Note that only specific portions of these systems are included in the LPSD SEL and SMA models. Because the support systems provide support functions for multiple front line systems, their availability after an earthquake is critical for successful mitigation of the seismic event.

The SELs are presented in Table 19-1-42A, which includes approximately 350 components. The structure associated with the SEL equipment are listed in Subsection 19.1.5.1.1.2

19.1.6.5.6.2 Seismic Fragility Analysis Results

The following building structures and the RCS components of the APR1400 standard design are evaluated by the CDFM method using the design-specific information within the scope of the DC application. The resulting HCLPF capacities and the associated failure modes of the SSCs are summarized in Table 19.1-43A. All the other SSCs are assumed to meet the target HCLPF capacity of 0.5g and assumed to have HCLPF of 0.5g conservatively.

- a. Safety-related building structures
 - 1. Reactor containment building
 - 2. Reactor containment internal
 - 3. Auxiliary building
 - 4. Emergency diesel generator building/Diesel fuel oil tank building
- b. RCS components
 - 1. Reactor pressure vessel (RPV)
 - 2. Reactor vessel internals (RVI)
 - 3. Pressurizer (PZR)
 - 4. Steam generators (SG)
 - 5. Reactor coolant pumps (RCP)
 - 6. Reactor coolant loop (RCL) piping

The APR1400 PRA-based SMA is bounding for site-specific SSC and soil effects (including sliding, overturning, liquefaction, and slope failure) (COL 19.1(8)).

The dominant contributors to the plant HCLPF are provided in Table 19.1-44E ~ T.

19.1.6.5.6.3 Plant Level HCLPF

This step is identical to that used for at-power PRA-based SMA as described in section 19.1.5.1.2.3. Therefore, the plant level HCLPF demonstrates the APR1400 design can withstand

a review level earthquake of 1.67 times the CSDRS and the assessment of the seismic capacity of the APR1400 design meets the expectations of SECY-93-087.

19.1.6.5.7 Risk Insights

19.1.6.5.7.1 Core Damage Risk Insights

For POS3B and POS 4A, all the core damage cutsets with single direct core damage event are shown in Table 19.1-44E. From POS 4B, 5, 6, 10, 11 and 12A, all the core damage cutsets with single direct core damage event are shown in Table 19.1-44F. The top 100 core damage cutsets which are not directly caused by single seismic induced failures are shown from Table 19.1-44G to Table 19.1-44T for each POS. As discussed above, based on the cutsets review, the plant HCLPF of APR1400 for core damage during the LPSD operation period is 0.5g. The important LPSD insights, core damage cutsets and HCLFP values for the APR1400 PRA-based SMA are as follows.

- a. APR1400 has 6 structures, any one of which failure lead to direct core damage due to the catastrophic failure of RCS or safety-related components. The sequence HCLPF is 0.5g, because each of structure is 0.94g, 0.51g, 0.52g, 0.5g, 0.5g and 0.5g. The 6 structures are listed in the section 19.1.6.5.1.4.1. The results are led by the collapse of seismic category II buildings (e.g. turbine building and compound building). The COL applicant is to confirm that the HCLPF of turbine building and compound building is equal to or higher than 1.67 times CSDRS.
- b. Therefore the structure failure induced S-DMG HCLPF is 0.5g. This result is applicable for all POSs from POS 3B to POS 12A except for the seismic induced failure event of containment equipment hatch. Containment equipment hatch is open and stowed during POS 3B and 4A.
- c. APR1400 has 6 RCS components, any one of which fails leads to direct core damage due to the catastrophic failure of RCS. The HCLPF of the each component is 0.92g, 0.51g, 0.6g, 0.63g, 1.31g and 0.5g. The 6 RCS components are listed in the section 19.1.6.5.1.4.1. Therefore the RCS component catastrophic failure induced S-DMG HCLPF is 0.5g. This result is applicable for all POSs from POS 3B to POS 12A except for the seismic induced failure event of Reactor Vessel Head open and stowed. Reactor vessel head is open and stowed from POS 6 to POS 10. Therefore this S-DMG is applicable only for POS 6 and POS 10.

- d. APR1400 has 3 components, any one of which fails leads to S-ISLOCA thus resulting in core damage. The HCLPF of the each component is same as 0.5g. The 3 components are listed in the section 19.1.6.5.1.4.2. Therefore the S-ISLOCA HCLPF is 0.5g. This result is applicable for all POSs from POS 3B to POS 12A.
- e. APR1400 has 13 components, any one of which failure lead to S-SBO thus resulting in core damage. The HCLPF of the each component is same as 0.5g. The 13 components are listed in the section 19.1.6.5.1.4.3. Therefore the SBO HCLPF is 0.5g. This result is applicable for all POSs from POS 3B to POS 12A
- f. APR1400 has 4 components, any one of which fails leads to S-IC thus resulting in core damage. The HCLPF of the each component is same as 0.5g. There is one exceptional component type which is all the screen-outed plant-wide distributed equipment (e.g. BOP piping & supports, AOVs, cable trays & supports, etc.) . It has the HCLPF of 0.75g. The 4 components are listed in the section 19.1.6.5.1.4.4. Therefore the LOIC HCLPF is 0.5g. This result is applicable for all POSs from POS 3B to POS 12A.
- g. APR1400 has 25 SSCs, any one of which fails leads to S-TLOCCW thus resulting in core damage. The HCLPF of each SSC is same as 0.5g. The 25 SSCs are listed in the section 19.1.6.5.1.4.5. Therefore the TLOCCW HCLPF is 0.5g. This result is applicable for all POSs from POS 3B to POS 12A.
- h. APR1400 has seismic induced initiating event which is not directly lead to core damage. It is Non-Recoverable LOCA. The risk insight for S-NRLOCA for each POS is as follows.
 - For POS 3B and 4A, core damage HCLPF is 0.5g which are composed of seismic induced failures of 1) one of AF system components (AF MDP, AF TDP or SG Nozzle) and 2) safety injection pump. The important operator actions are S-NRLOCA isolation, RCS Makeup, SCS cooling establishment and SG Cooling Establishment. The most important random failure is the emergency diesel generator fails to run.
 - For POS 4B, 5, 6, 10, 11 and 12A, there are no cutsets which are composed of seismic induced failure events only. The important seismic induced failures are seismic induced failure of Safety Injection Pump. The important operator actions are S-NRLOCA isolation, RCS Makeup, SCS cooling establishment and feed and bleed operation. The most important random failure is the emergency diesel generator fails to run.

- i. APR1400 has the other seismic induced initiating event which is not directly lead to core damage. It is seismic induced loss of off-site power. The risk insight for S-LOOP for each POS is as follows.
 - For POS 3B and 4A, there are no cutsets which are composed of seismic induced failure events only. The important seismic induced failures are seismic induced failure of AF TDP, AF MDP, SG Nozzle and Safety Injection Pump. The important operator actions are SCS cooling establishment. The most important random failure is the emergency diesel generator fails to run.
 - For POS 4B, 5, 6, 10, 11 and 12A, there are no cutsets which are composed of seismic induced failure events only. The important seismic induced failures are seismic induced failure of Safety Injection Pump. The important operator actions are SCS cooling establishment and feed and bleed operation. The most important random failure is the emergency diesel generator fails to run.
- j. Though fragilities are assigned to a number of important SSCs, the logic model incorporated the fragility evaluation results, and the cutsets are derived to determine sequence-level and plant-level HCLPF, the fragility values have much conservatism and uncertainties. As more plant specific information are reflected into the fragility analysis, more realistic results would be gained.

19.1.6.5.7.2 Containment Failure Risk Insights

For POS 3B and POS 4A all the containment failure cutsets with single direct event are shown in Table 19.1-44E. From POS 4B, 5, 6, 10, 11 and 12A, all the containment failure cutsets with single direct event are shown in Table 19.1-44F. The top 100 containment failure cutsets which are not directly caused by single seismic induced failure are shown from Table 19.1-44G to Table 19.1-44T for each POS. Based on the cutsets review, the plant HCLPF of APR1400 for containment failure during the LPSD operation period is 0.5g. The important insights for containment failure for the LPSD PRA-based SMA of APR1400 are as follows.

- a. For POS 3B and 4A, Containment Hatch is open and stowed therefore all core damage cutsets for POS 3B and 4A are also containment failure cutsets.
- b. From POS 4B to POS 12A, due to the unavailability of ESFAS and a lot of maintenance tasks during the LPSD period, seismic induced direct core damage initiator is conservatively assumed to directly lead to containment isolation failure conservatively.

- c. For all POSs, because the most important mitigation functions for the S-NRLOCA are related to the LOCA path isolation, all the core damage sequences for S-NRLOCA is conservatively assumed to lead to containment failure.
- d. For S-LOOP sequences, the risk insight gained from the containment failure cutsets review is as follows.
 - FOR POS 3B and 4A, there are no cutsets which are composed of seismic induced failure events only. The important seismic induced failures are seismic induced failure of AF TDP, MDP, SG Nozzle and Safety Injection Pump. The important operator actions are SCS cooling establishment. The most important random failure is the emergency diesel generator fails to run.
 - FOR POS 4B, 5, 6, 10, 11 and 12A, there are no cutsets which are composed of seismic induced failure events only. The important seismic induced failures are seismic induced failure of Safety Injection Pump. The important operator actions are SCS cooling establishment and feed and bleed operation. The most important random failure is the emergency diesel generator fails to run.

Table 19.1-41A

Systems Considered for the LPSD SEL (1 of 1)

System	Description
Actuation	Containment isolation (CIS)
	Containment ventilation isolation (CVIS)
	EDG start and load sequence
RCS	Reactor Coolant System, including RC Pumps, SG, PZR, SRVs, POSRVs
MS	Main Steam: MS SRVs, MS SG ADVs
AFW	Auxiliary Feedwater (MD pump only)
CVCS	Chemical Volume & Control System: Charging only
SC	Shutdown Cooling System
SI	Safety Injection
CCW	Component Cooling Water
ESW	Essential Service Water
ECW	Essential Chilled Water
EDG HVAC	Emergency Diesel Generator Area HVAC System
E-I&C HVAC	Electrical and I&C Equipment Areas HVAC System
ESW/CCW HVAC	ESW Pump Building / CCW HX Building HVAC System
Aux Bldg HVAC	Aux Building Controlled Area HVAC System
Aux Bldg HVAC	Aux Building Clean Area HVAC System
MCR	Main Control Room Consoles
ESF	ESF Cabinets
DG Fuel	Diesel Fuel Oil Transfer System
EDG	Emergency Diesel Generators
EP	Electrical power

Table 19.1-41B

LPSD PRA-based SMA Plant Operating States (1 of 1)

Plant Operating State	Description	Primary Sys. Water Lvl	Primary System Pressure & Temperature	Tech. Spec. Mode
3B	Cooldown with Shutdown Cooling System to 140°F		450-15 psia; 212–140°F	5
4A	Reactor Coolant System drain-down (pressurizer manway closed)	Below Reactor Flange	Slight positive pressure or depressurized; ≤140°F	
4B	Reactor Coolant System drain-down (manway open)		Depressurized; ≤140°F	
5	Reduced Inventory operation and nozzle dam installation			
6	Fill for refueling		Depressurized or slight vacuum during refill; ≤140°F	
10	Reactor Coolant System drain-down to Reduced Inventory after refueling			
11	Reduced Inventory operation with steam generator manway closure			
12A	Refill Reactor Coolant System (pressurizer manway open)			

Table 19.1-42A (1 of 19)

LPSD Seismic Equipment List

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor ¹⁾
1	1-431-M-RV01	Reactor Pressure Vessel	69'-156'	Containment	1
2	-	Reactor Vessel Internals	69'-156'	Containment	1
3		Reactor Vessel Head (Removed and Stowed)	-	Containment	1
4	-	Containment Hatch (Open & Stowed)	-	Containment	1
5	1-431-M-SG01	Steam Generator #1	114'-136'	Containment	1
6	1-431-M-SG02	Steam Generator #2	114'-136'	Containment	
7	1-431-M-PZ01	Pressurizer	114'-156'	Containment	1
8	1-431-M-PP01A	Reactor Coolant Pump #1	114'-136'	Containment	1
9	1-431-M-PP01B	Reactor Coolant Pump #2	114'-136'	Containment	
10	1-431-M-PP01C	Reactor Coolant Pump #3	114'-136'	Containment	
11	1-431-M-PP01D	Reactor Coolant Pump #4	114'-136'	Containment	
12	1-441-M-TK01A	Safety Injection Tank 1	136'	Containment	1
13	1-441-M-TK01B	Safety Injection Tank 2	136'	Containment	
14	1-441-M-TK01C	Safety Injection Tank 3	136'	Containment	
15	1-441-M-TK01D	Safety Injection Tank 4	136'	Containment	
16	1-451-M-HE01	Regenerative Heat Exchanger	128'	Containment	1
17	1-451-M-PP01A	Charging Pumps #1	55'	Aux.	1
18	1-451-M-PP01B	Charging Pumps #2	55'	Aux.	
19	1-451-M-HE02	Letdown Heat Exchanger	100'	Containment	1

1) Fully Correlated equipment have "1" correlation factor

Table 19.1-42A (2 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
20	1-521-V-0012	Main Steam Isolation Valve	137'	Aux.	1
21	1-521-V-0011	Main Steam Isolation Valve	137'	Aux.	
22	1-521-V-0014	Main Steam Isolation Valve	137'	Aux.	
23	1-521-V-0013	Main Steam Isolation Valve	137'	Aux.	
24	1-521-V-0101	Main Steam Atmospheric Dump Valve	137'	Aux.	1
25	1-521-V-0102	Main Steam Atmospheric Dump Valve	137'	Aux.	
26	1-521-V-0104	Main Steam Atmospheric Dump Valve	137'	Aux.	
27	1-521-V-0103	Main Steam Atmospheric Dump Valve	137'	Aux.	
28	1-461-M-TK01A	Component Cooling Water Surge Tank	172'	Aux.	1
29	1-461-M-TK01B	Component Cooling Water Surge Tank	172'	Aux.	
30	1-633-M-CH01A	Essential Chiller (includes Compressor Condenser, Evaporator, controls, RVs, Tanks)	78'	Aux.	1
31	1-633-M-CH02A	Essential Chiller (includes Compressor Condenser, Evaporator, controls, RVs, Tanks)	78'	Aux.	
32	1-633-M-CH01B	Essential Chiller (includes Compressor Condenser, Evaporator, controls, RVs, Tanks)	78'	Aux.	
33	1-633-M-CH02B	Essential Chiller (includes Compressor Condenser, Evaporator, controls, RVs, Tanks)	78'	Aux.	
34	1-607-M-HV33A	MDAFW Pump Room Unit	78'	Aux.	1
35	1-607-M-CW33A	MDAFW Pump Room Cubical Cooler Cooling Coil	78'	Aux.	
36	1-607-M-HV33B	MDAFW Pump Room Unit	78'	Aux.	
37	1-607-M-CW33B	MDAFW Pump Room Cubical Cooler Cooling Coil	78'	Aux.	

Table 19.1-42A (3 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
38	1-431-V-0200	POSRV 200	136'	Containment	1
39	1-431-V-0201	POSRV 201	136'	Containment	
40	1-431-V-0132	MOV Control Valves (POSRV 201)	136'	Containment	
41	1-431-V-0133	MOV Control Valves (POSRV 201)	136'	Containment	
42	1-431-V-0202	POSRV 202	136'	Containment	
43	1-431-V-0134	MOV Control Valves (POSRV 202)	136'	Containment	
44	1-431-V-0135	MOV Control Valves (POSRV 202)	136'	Containment	
45	1-431-V-0203	POSRV 203	136'	Containment	
46	1-431-V-0136	MOV Control Valves (POSRV 203)	136'	Containment	
47	1-431-V-0137	MOV Control Valves (POSRV 203)	136'	Containment	
48	1-441-M-PP01A	SDC Pump 1	50'	Aux.	1
49	1-441-M-PP01B	SDC Pump 2	50'	Aux.	
50	1-441-M-PP02A	SI Pump 1	50'	Aux.	1
51	1-441-M-PP02B	SI Pump 2	50'	Aux.	
52	1-441-M-PP02C	SI Pump 3	50'	Aux.	
53	1-441-M-PP02D	SI Pump 4	50'	Aux.	
54	1-441-M-HE01A	SDC HX 1	50'	Aux.	1
55	1-441-M-HE01B	SDC HX 2	50'	Aux.	
56	1-441-M-HE02A	SDC Miniflow HX 1	50'	Aux.	1
57	1-441-M-HE02B	SDC Miniflow HX 2	50'	Aux.	

Table 19.1-42A (4 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
58	1-442-M-PP01A	Containment Spray Pump 1	50'	Aux.	1
59	1-442-M-PP01B	Containment Spray Pump 2	50'	Aux.	
60	1-442-M-HE01A	Containment Spray Heat Exchanger	55'	Aux.	1
61	1-442-M-HE01B	Containment Spray Line 2 Heat Exchanger	55'	Aux.	
62	1-442-M-HE02A	CS Pump 1 Miniflow Heat Exchanger	50'	Aux.	1
63	1-442-M-HE02B	CS Pump 2 Miniflow Heat Exchanger	50'	Aux.	
64	1-461-M-PP01A	CCW Pump 1A	55'	Aux.	1
65	1-461-M-PP02A	CCW Pump 2A	55'	Aux.	
66	1-461-M-PP01B	CCW Pump 1B	55'	Aux.	
67	1-461-M-PP02B	CCW Pump 2B	55'	Aux.	
68	1-461-M-HE01A	CCW Heat Exchanger 1A	100'	CCW HX Building	1
69	1-461-M-HE02A	CCW Heat Exchanger 2A	100'	CCW HX Building	
70	1-461-M-HE03A	CCW Heat Exchanger 3A	100'	CCW HX Building	
71	1-461-M-HE01B	CCW Heat Exchanger 1B	100'	CCW HX Building	
72	1-461-M-HE02B	CCW Heat Exchanger 2B	100'	CCW HX Building	
73	1-461-M-HE03B	CCW Heat Exchanger 3B	100'	CCW HX Building	

Table 19.1-42A (5 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
74	1-462-M-PP01A	ESW Pump 1A	69'	ESW building	1
75	1-462-M-PP02A	ESW Pump 2A	69'	ESW building	
76	1-462-M-PP01B	ESW Pump 1B	69'	ESW building	
77	1-462-M-PP02B	ESW Pump 2B	69'	ESW building	
78	1-542-M-PP02A	Aux Feedwater Pump A (Motor Driven)	78'	Aux.	1
79	1-542-M-PP02B	Aux Feedwater Pump B (Motor Driven)	78'	Aux.	
80	1-591-M-PP22A	Fuel Oil Feed Pump	100'	EDG Building	1
81	1-591-M-PP22B	Fuel Oil Feed Pump	100'	EDG Building	
82	1-591-M-PP22C	Fuel Oil Feed Pump	100'	Aux.	1
83	1-591-M-PP22D	Fuel Oil Feed Pump	100'	Aux.	
84	1-595-M-TK01A	Diesel Fuel Oil Storage Tank A	63'	EDG Building	1
85	1-595-M-TK01B	Diesel Fuel Oil Storage Tank B	63'	EDG Building	
86	1-595-M-TK01C	Diesel Fuel Oil Storage Tank C	65'	Aux.	1
87	1-595-M-TK01D	Diesel Fuel Oil Storage Tank D	65'	Aux.	
88	1-595-M-PP01A	Diesel Fuel Oil Transfer Pump	63'	EDG Building	1
89	1-595-M-PP01B	Diesel Fuel Oil Transfer Pump	63'	EDG Building	
90	1-595-M-PP02A	Diesel Fuel Oil Transfer Pump	63'	EDG Building	
91	1-595-M-PP02B	Diesel Fuel Oil Transfer Pump	63'	EDG Building	

Table 19.1-42A (6 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
92	1-595-M-PP01C	Diesel Fuel Oil Transfer Pump	65'	Aux.	1
93	1-595-M-PP01D	Diesel Fuel Oil Transfer Pump	65'	Aux.	
94	1-595-M-PP02C	Diesel Fuel Oil Transfer Pump	65'	Aux.	
95	1-595-M-PP02D	Diesel Fuel Oil Transfer Pump	65'	Aux.	
96	1-595-M-TK02A	Diesel Fuel Oil Day Tank A	121'	EDG Building	1
97	1-595-M-TK02B	Diesel Fuel Oil Day Tank B	121'	EDG Building	
98	1-595-M-TK02C	Diesel Fuel Oil Day Tank C	120'	Aux.	1
99	1-595-M-TK02D	Diesel Fuel Oil Day Tank D	120'	Aux.	
100	1-601-V-Y0011A	Electro-Hydraulic Inlet Damper	172'	Aux.	1
101	1-601-V-Y0011B	Electro-Hydraulic Inlet Damper	172'	Aux.	
102	1-602-M-AH02A	EDG Room Exhaust Fan/Motor	100'	EDG Building	1
103	1-602-M-AH02B	EDG Room Exhaust Fan/Motor	100'	EDG Building	
104	1-602-M-AH02C	EDG Room Exhaust Fan/Motor	172'	Aux.	1
105	1-602-M-AH02D	EDG Room Exhaust Fan/Motor	172'	Aux.	
106	1-591-M-DG01A	4.16kV CLASS 1E DIESEL GENERATORS 1-591-M-DG01A	100'	EDG Building	1
107	1-591-M-DG01B	4.16kV CLASS 1E DIESEL GENERATORS 1-591-M-DG01B	100'	EDG Building	
108	1-591-M-DG01C	4.16kV CLASS 1E DIESEL GENERATORS 1-591-M-DG01C	100'	Aux.	1
109	1-591-M-DG01D	4.16kV CLASS 1E DIESEL GENERATORS 1-591-M-DG01D	100'	Aux.	

Table 19.1-42A (7 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
110	1-606-M-HV10A	CS PUMP & MINIFLOW HEAT EXCHANGER RM Aux Bld Controlled Area HVAC Fan/Motor	50'	Aux.	1
111	1-606-M-CW10A	CS (Quad C) Mini Flow HX Room Cubical Cooler Cooling Coil	50'	Aux.	
112	1-606-M-HV10B	CS PUMP & MINIFLOW HEAT EXCHANGER RM Aux Bld Controlled Area HVAC Fan/Motor	50'	Aux.	
113	1-606-M-CW10B	CS (Quad D) Mini Flow HX Room Cubical Cooler Cooling Coil	50'	Aux.	
114	1-606-M-HV11A	SI PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	50'	Aux.	1
115	1-606-M-CW11A	SI Pump (Quad C) Room Cubical Cooler Cooling Coil	50'	Aux.	
116	1-606-M-HV11B	SI PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	50'	Aux.	
117	1-606-M-CW11B	SI Pump (Quad D) Room Cubical Cooler Cooling Coil	50'	Aux.	
118	1-606-M-HV12A	SI PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	50'	Aux.	
119	1-606-M-CW12A	SI Pump (Quad A) Room Cubical Cooler Cooling Coil	55'	Aux.	
120	1-606-M-HV12B	SI PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	50'	Aux.	
121	1-606-M-CW12B	SI Pump (Quad B) Room Cubical Cooler Cooling Coil	50'	Aux.	1
122	1-606-M-HV16A	SC PUMP & MINIFLOW HEAT EXCHANGER RM Cubical Cooler	50'	Aux.	
123	1-606-M-CW16A	SC Pump & Mini Flow HX Room Cubical Cooler Cooling Coil	50'	Aux.	
124	1-606-M-HV16B	SC PUMP & MINIFLOW HEAT EXCHANGER RM Cubical Cooler	50'	Aux.	
125	1-606-M-CW16B	SC Pump & Mini Flow HX Room Cubical Cooler Cooling Coil	50'	Aux.	1
126	1-606-M-HV18A	CHARGING PUMP RM Cubicle Cooler	55'	Aux.	
127	1-606-M-HV18B	CHARGING PUMP RM Cubicle Cooler	55'	Aux.	

Table 19.1-42A (8 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
128	1-606-V-Y0001A	Aux Building Controlled Area (I) Emergency Exhaust ACU Outlet Damper	156'	Aux.	1
129	1-606-V-Y0001B	Aux Building Controlled Area (II) Emergency Exhaust ACU Outlet Damper	195'	Aux.	
130	1-606-V-Y0002A	Aux Building Controlled Area (I) Emergency Exhaust ACU Inlet Damper	156'	Aux.	
131	1-606-V-Y0002B	Aux Building Controlled Area (II) Emergency Exhaust ACU Inlet Damper	195'	Aux.	
132	1-607-M-HV31A	Ess. Chiller Room Cubical Cooler	78'	Aux.	1
133	1-607-M-CW31A	Ess. Chiller Room Cubical Cooler Cooling Coil	78'	Aux.	
134	1-607-M-HV31B	Ess. Chiller Room Cubical Cooler	78'	Aux.	
135	1-607-M-CW31B	Ess. Chiller Room Cubical Cooler Cooling Coil	78'	Aux.	
136	1-607-M-HV32A	Ess. Chiller Room Cubical Cooler	78'	Aux.	
137	1-607-M-CW32A	Ess. Chiller Room Cubical Cooler Cooling Coil	78'	Aux.	
138	1-607-M-HV32B	Ess. Chiller Room Cubical Cooler	78'	Aux.	
139	1-607-M-CW32B	Ess. Chiller Room Cubical Cooler Cooling Coil	78'	Aux.	

Table 19.1-42A (9 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
140	1-606-M-HV13A	CCW PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	1
141	1-606-M-CW13A	CCW Pump (Quad A) Room Cubical Cooler Cooling Coil	55'	Aux.	
142	1-606-M-HV13B	CCW PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	
143	1-606-M-CW13B	CCW Pump (Quad B) Room Cubical Cooler Cooling Coil	55'	Aux.	
144	1-606-M-HV14A	CCW PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	
145	1-606-M-CW14A	CCW Pump (Quad C) Room Cubical Cooler Cooling Coil	55'	Aux.	
146	1-606-M-HV14B	CCW PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	
147	1-606-M-CW14B	CCW Pump (Quad D) Room Cubical Cooler Cooling Coil	55'	Aux.	
148	1-606-M-HV21B	AUX. CHARGING PUMP RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	1
149	1-606-M-HV17A	SC HEAT EXCHANGER RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	1
150	1-606-M-CW17A	SC HX Room Cubical Cooler Cooling Coil	55'	Aux.	
151	1-606-M-HV17B	SC HEAT EXCHANGER RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	
152	1-606-M-CW17B	SC HX Room Cubical Cooler Cooling Coil	55'	Aux.	
153	1-606-M-HV15A	CS HEAT EXCHANGER RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	1
154	1-606-M-CW15A	CS HX Room Cubical Cooler Cooling Coil	55'	Aux.	
155	1-606-M-HV15B	CS HEAT EXCHANGER RM Aux Bld Controlled Area HVAC Fan/Motor	55'	Aux.	

Table 19.1-42A (10 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
156	1-607-M-HV33A	MDAFW Pump Room Cubical Cooler Cooling Coil	78'	Aux.	1
157	1-607-M-CW33A	MDAFW Pump Room Cubical Cooler Cooling Coil	78'	Aux.	
158	1-607-M-HV33B	MDAFW Pump Room Cubical Cooler Cooling Coil	78'	Aux.	
159	1-607-M-CW33B	MDAFW Pump Room Cubical Cooler Cooling Coil	78'	Aux.	
160	1-603-M-HV01A	CLASS 1E SWITCHGEAR 01C RM Cubical Cooler	78'	Aux.	1
161	1-603-M-HV01B	CLASS 1E SWITCHGEAR 01D RM Cubical Cooler	78'	Aux.	
162	1-603-M-HV02A	CLASS 1E LOADCENTER 01C RM Cubical Cooler	78'	Aux.	
163	1-603-M-HV02B	CLASS 1E LOADCENTER 01D RM Cubical Cooler	78'	Aux.	
164	1-603-M-HV03A	CHANNEL A DC&IP EQUIP. RM CC Cubical Cooler	78'	Aux.	1
165	1-603-M-HV03B	CHANNEL B DC&IP EQUIP. RM Cubical Cooler	78'	Aux.	
166	1-603-M-HV04A	CHANNEL C DC&IP EQUIP. RM Cubical Cooler	78'	Aux.	
167	1-603-M-HV04B	CHANNEL D DC&IP EQUIP. RM Cubical Cooler	78'	Aux.	
168	1-603-M-HV05A	MUX A RM Cubical Cooler	78'	Aux.	1
169	1-603-M-HV05B	MUX B RM Cubical Cooler	78'	Aux.	
170	1-603-M-HV07A	CLASS-1E SWITCHGEAR 01A RM Cubical Cooler	78'	Aux.	1
171	1-603-M-HV07B	CLASS-1E SWITCHGEAR 01B RM Cubical Cooler	78'	Aux.	
172	1-603-M-CW07B	Class 1E Switchgear 01B Room Cubical Cooler Cooling Coil	78'	Aux.	
173	1-603-M-CW01C	Class 1E Switchgear 01C Room Cubical Cooler Cooling Coil	78'	Aux.	
174	1-603-M-CW03A	Channel A DC&IP Equip Room Cubical Cooler Cooling Coil	78'	Aux.	1
175	1-603-M-CW04C	Channel C DC&IP Equip Room Cubical Cooler Cooling Coil	78'	Aux.	

Table 19.1-42A (11 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
176	1-603-M-CW02C	Class 1E Load Center 01C Room Cubical Cooler Cooling Coil	78'	Aux.	1
177	1-603-M-CW02D	Class 1E Load Center 01D Room Cubical Cooler Cooling Coil	78'	Aux.	
178	1-603-M-CW07A	Class 1E Switchgear 01A Room Cubical Cooler Cooling Coil	78'	Aux.	1
179	1-603-M-CW01D	Class 1E Switchgear 01D Room Cubical Cooler Cooling Coil	78'	Aux.	
180	1-603-M-CW03B	Channel B DC&IP Equip Room Cubical Cooler Cooling Coil	78'	Aux.	1
181	1-603-M-CW04D	Channel D DC&IP Equip Room Cubical Cooler Cooling Coil	78'	Aux.	
182	1-603-M-HV06B	480V CLASS 1-E MCC 01B RM Cubical Cooler	100'	Aux.	1
183	1-603-M-CW06B	480V Class 1E MCC 01B Room Cubical Cooler Cooling Coil	100'	Aux.	
184	1-603-M-CW06A	480V Class 1E MCC 01A Room Cubical Cooler Cooling Coil	100'	Aux.	
185	1-606-M-HV19A	Mechanical Pen Room HVAC Fan/Motor	100'	Aux.	1
186	1-606-M-HV19B	Mechanical Pen Room HVAC Fan/Motor	100'	Aux.	
187	1-602-M-HV12C	EDG Room Emergency Cubical Cooler	100'	Aux.	1
188	1-602-M-AH12C	EDG Room Emergency Cubical Cooler Fan/Motor	100'	Aux.	
189	1-602-M-HV13C	EDG Room Emergency Cubical Cooler	100'	Aux.	
190	1-602-M-AH13C	EDG Room Emergency Cubical Cooler Fan/Motor	100'	Aux.	
191	1-602-M-HV12D	EDG Room Emergency Cubical Cooler	100'	Aux.	
192	1-602-M-AH12D	EDG Room Emergency Cubical Cooler Fan/Motor	100'	Aux.	
193	1-602-M-HV13D	EDG Room Emergency Cubical Cooler	100'	Aux.	
194	1-602-M-AH13D	EDG Room Emergency Cubical Cooler Fan/Motor	100'	Aux.	

Table 19.1-42A (12 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
195	1-603-M-HV09A	ELECT. PENETRATION RM Cubical Cooler	120'	Aux.	1
196	1-603-M-HV09B	ELECT. PENETRATION (D) RM Cubical Cooler	120'	Aux.	
197	1-603-M-HV14B	480V CLASS-1E MCC 03B RM Cubical Cooler	120'	Aux.	1
198	1-603-M-CW14B	480V Class 1E MCC 03B Room Cubical Cooler Cooling Coil	120'	Aux.	
199	1-606-M-HV20A	Mechanical Pen Room HVAC Fan/Motor	120'	Aux.	1
200	1-606-M-HV20B	Mechanical Pen Room HVAC Fan/Motor	120'	Aux.	
201	1-606-M-CW20B	Mechanical Penetration Room Cubical Cooler Cooling Coil	120'	Aux.	
202	1-603-M-HV10A	480V CLASS-1E MCC 03C RM Cubical Cooler	137'	Aux.	1
203	1-603-M-HV10B	480V CLASS-1E MCC 03D RM Cubical Cooler	137'	Aux.	
204	1-603-M-CW10D	480V Class 1E MCC 03D Room Cubical Cooler Cooling Coil	137'	Aux.	
205	1-603-M-HV14A	480V CLASS-1E MCC 03A RM Cubical Cooler	137'	Aux.	
206	1-603-M-HV15A	480V CLASS-1E MCC 04A RM Cubical Cooler	137'	Aux.	
207	1-603-M-HV15B	480V CLASS-1E MCC 04B RM Cubical Cooler	137'	Aux.	
208	1-603-M-CW15B	480V Class 1E MCC 04B Room Cubical Cooler Cooling Coil	137'	Aux.	
209	1-603-M-CW10C	480V Class 1E MCC 03C Room Cubical Cooler Cooling Coil	137'	Aux.	
210	1-603-M-CW15A	480V Class 1E MCC 04A Room Cubical Cooler Cooling Coil	137'	Aux.	
211	1-603-M-CW14A	480V Class 1E MCC 03A Room Cubical Cooler Cooling Coil	137'	Aux.	
212	1-603-M-HV12A	PENETRATION MUX A RM Cubical Cooler	137'	Aux.	1
213	1-603-M-HV12B	PENETRATION MUX B RM Cubical Cooler	137'	Aux.	
214	1-603-M-CW12B	Pent. MUX B Room Cubical Cooler Cooling Coil	137'	Aux.	

Table 19.1-42A (13 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
215	1-603-M-HV11A	ELECT. PENETRATION RM Cubical Cooler	137'	Aux.	1
216	1-603-M-HV11B	ELECT. PENETRATION RM (D) Cubical Cooler	137'	Aux.	
217	1-603-M-HV13A	ELECTRICAL PENETRATION RM(A) Cubical Cooler	137'	Aux.	
218	1-603-M-HV13B	ELECTRICAL PENETRATION RM(B) Cubical Cooler	137'	Aux.	
219	1-603-M-CW13B	Elect Penetration Room B Cubical Cooler Cooling Coil	137'	Aux.	
220	1-603-M-HV18A	RSC RM Cubical Cooler	137'	Aux.	1
221	1-603-M-HV18B	RSC RM Cubical Cooler	137'	Aux.	
222	1-603-M-CW18B	RSC Room Cubical Cooler Cooling Coil	137'	Aux.	
223	1-603-M-HV16A	I&C Equipment Room (A) Cubical Cooler	157'	Aux.	1
224	1-603-M-HV16B	I&C Equipment Room (B) Cubical Cooler	157'	Aux.	
225	1-603-M-CW16B	I&C Equip Room B Cubical Cooler Cooling Coil	157'	Aux.	
226	1-603-M-HV17A	I&C Equipment Room (C) Cubical Cooler	157'	Aux.	
227	1-603-M-HV17B	I&C Equipment Room (D) Cubical Cooler	157'	Aux.	
228	1-603-M-CW17D	I&C Equip Room D Cubical Cooler Cooling Coil	157'	Aux.	
229	1-603-M-CW16A	I&C Equip Room A Cubical Cooler Cooling Coil	157'	Aux.	
230	1-603-M-CW17C	I&C Equip Room C Cubical Cooler Cooling Coil	157'	Aux.	1
231	1-601-M-CW01A	Control Room Supply AHU Cooling Coil	172'	Aux.	
232	1-601-M-CW01B	Control Room Supply AHU Cooling Coil	172'	Aux.	

Table 19.1-42A (14 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
233	1-602-M-HV12A	EDG Room Emergency Cubical Cooler	100'	EDG Building	1
234	1-602-M-HV12B	EDG Room Emergency Cubical Cooler	100'	EDG Building	
235	1-602-M-HV13A	EDG Room Emergency Cubical Cooler	135'	EDG Building	1
236	1-602-M-HV13B	EDG Room Emergency Cubical Cooler	135'	EDG Building	
237	1-605-M-AH01A	ESW Pump Room Supply Fan	90'	ESW building	1
238	1-605-M-AH02A	ESW Pump Room Supply Fan	90'	ESW building	
239	1-605-M-AH01B	ESW Pump Room Supply Fan	90'	ESW building	
240	1-605-M-AH02B	ESW Pump Room Supply Fan	90'	ESW building	
241	1-633-M-PP01A	Essential Chilled Water Pump	78'	Aux.	1
242	1-633-M-PP01B	Essential Chilled Water Pump	78'	Aux.	
243	1-633-M-PP02A	Essential Chilled Water Pump	78'	Aux.	
244	1-633-M-PP02B	Essential Chilled Water Pump	78'	Aux.	
245	1-751-J-PM01	RO Console (Frame)	157'	Aux.	1
246	1-751-J-PM02	TO/EO Console (Frame)	157'	Aux.	
247	1-751-J-PM03	SS Console (Frame)	157'	Aux.	
248	1-751-J-PM04	STA Console (Frame)	157'	Aux.	
249	1-751-J-PM05	Safety Console (Frame)	157'	Aux.	1
250	1-752-J-PA03A	ESF-CCS Cabinet(A, B, C, D)	157'	Aux.	1
251	1-752-J-PA03B	ESF-CCS Group Controller Cabinet (Ch.BE)	157'	Aux.	
252	1-752-J-PA03C	ESF-CCS Group Controller Cabinet (Ch.CE)	157'	Aux.	
253	1-752-J-PA03D	ESF-CCS Group Controller Cabinet (Ch.DE)	157'	Aux.	

Table 19.1-42A (15 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
254	1-752-J-PA14A	Plant Protection System Cabinet(A)	157'	Aux.	1
255	1-752-J-PA14B	PPS Cabinet Ch.B-1	157'	Aux.	
256	1-752-J-PA14C	Plant Protection System Cabinet(C)	157'	Aux.	
257	1-752-J-PA14D	PPS Cabinet Ch.D-1	157'	Aux.	
262	1-823-E-SW01A	CLASS 1E AB 4.16kV SWGR 01A	78'	Aux.	1
263	1-823-E-SW01B	CLASS 1E AB 4.16kV SWGR 01B	78'	Aux.	
264	1-823-E-SW01C	CLASS 1E AB 4.16kV SWGR 01C	78'	Aux.	
265	1-823-E-SW01D	CLASS 1E AB 4.16kV SWGR 01D	78'	Aux.	
266	1-825-E-LC01A	CLASS 1E AUX. BLDG 480V LOAD CENTER 1-825-E-LC01A	78'	Aux.	1
267	1-825-E-TR01A	480V LOAD CENTER XFMR	78'	Aux.	
268	1-825-E-LC01B	CLASS 1E AUX. BLDG 480V LOAD CENTER 1-825-E-LC01B(DIV.II)	78'	Aux.	
269	1-825-E-TR01B	480V LOAD CENTER XFMR	78'	Aux.	
270	1-825-E-LC01C	CLASS 1E AUX. BLDG 480V LOAD CENTER 1-825-E-LC01C	78'	Aux.	
271	1-825-E-TR01C	480V LOAD CENTER XFMR	78'	Aux.	
272	1-825-E-LC01D	CLASS 1E AUX. BLDG 480V LOAD CENTER 1-825-E-LC01D	78'	Aux.	
273	1-825-E-TR01D	480V LOAD CENTER XFMR	78'	Aux.	

Table 19.1-42A (16 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
274	1-827-E-MC01C	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC01C	78'	Aux.	1
275	1-827-E-MC01C-3	120/208V AC DIST. PNL	78'	Aux.	
276	1-827-E-MC01D	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC01D	78'	Aux.	
277	1-827-E-MC01D-3	120/208V AC DIST. PNL	78'	Aux.	
278	1-827-E-MC02C	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC02C	78'	Aux.	
279	1-827-E-MC02C-3	120/208V AC DIST. PNL	78'	Aux.	
280	1-827-E-MC02D	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC02D	78'	Aux.	
281	1-827-E-MC02D-3	120/208V AC DIST. PNL	78'	Aux.	
282	1-827-E-MC01A	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC01A	100'	Aux.	1
283	1-827-E-MC01A-3	120/208V AC DIST. PNL	100'	Aux.	
284	1-827-E-MC01B	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC01B	100'	Aux.	
285	1-827-E-MC01B-3	120/208V AC DIST. PNL	100'	Aux.	
286	1-827-E-MC04C	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC04C	100'	Aux.	
287	1-827-E-MC04C-3	120/208V AC DIST. PNL	100'	Aux.	
288	1-827-E-MC04D	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC04D(DIV. II)	100'	Aux.	
289	1-827-E-MC04D-3	120/208V AC DIST. PNL	100'	Aux.	
290	1-827-E-MC03B	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC03B	120'	Aux.	1
291	1-827-E-MC03B-3	120/208V AC DIST. PNL	120'	Aux.	

Table 19.1-42A (17 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
292	1-827-E-MC03A	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC03A	137'	Aux.	1
293	1-827-E-MC03A-3	120/208V AC DIST. PNL	137'	Aux.	
294	1-827-E-MC03C	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC03C	137'	Aux.	
295	1-827-E-MC03C-3	120/208V AC DIST. PNL	137'	Aux.	
296	1-827-E-MC03D	CLASS 1E A/B 480V MCC 1-827-E-MC03D	137'	Aux.	
297	1-827-E-MC03D-3	120/208V AC DIST. PNL	137'	Aux.	
298	1-827-E-MC04A	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC04A	137'	Aux.	
299	1-827-E-MC04A-3	120/208V AC DIST. PNL	137'	Aux.	
300	1-827-E-MC04B	CLASS 1E AUX. BLDG 480V MCC 1-827-E-MC04B	137'	Aux.	
301	1-827-E-MC04B-3	120/208V AC DIST. PNL	137'	Aux.	
302	1-827-E-MC02A	CLASS 1E ESW STRUCTURE AREA 480V MCC 1-827-E-MC02A	100'	ESW building	1
303	1-827-E-MC02A-3	120/208V AC DIST. PNL	100'	ESW building	
304	1-827-E-MC02B	CLASS 1E ESW STRUCTURE AREA 480V MCC 1-827-E-MC02B	100'	ESW building	
305	1-827-E-MC02B-3	120/208V AC DIST. PNL	100'	ESW building	
306	1-827-E-MC05A	CLASS 1E EDG-A BLDG 480V MCC 1-827-E-MC05A	100'	EDG Building	
307	1-827-E-MC05A-3	120/208V AC DIST. PNL	100'	EDG Building	
308	1-827-E-MC05B	CLASS 1E EDG-B BLDG 480V MCC 1-827-E-MC05B	100'	EDG Building	
309	1-827-E-MC05B-3	120/208V AC DIST. PNL	100'	EDG Building	

Table 19.1-42A (18 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
310	1-841-E-MC01A	CLASS 1E 125V DC CONTROL CENTER (A/B)	78'	Aux.	1
311	1-841-E-MC01A-C1	CLASS 1E 125V DC DISTR. PNL 1	78'	Aux.	
312	1-841-E-MC01A-D1	CLASS 1E 125V DC DISTR. PNL 2	78'	Aux.	
313	1-841-E-MC01B	CLASS 1E 125V DC CONTROL CENTER (A/B)	78'	Aux.	
314	1-841-E-MC01B-C1	CLASS 1E 125V DC DISTR. PNL 1	78'	Aux.	
315	1-841-E-MC01B-D1	CLASS 1E 125V DC DISTR. PNL 2	78'	Aux.	
316	1-841-E-MC01C	CLASS 1E 125V DC CONTROL CENTER (A/B)	78'	Aux.	
317	1-841-E-MC01C-D1	CLASS 1E 125V DC DISTR. PNL	78'	Aux.	
318	1-841-E-MC01D	CLASS 1E 125V DC CONTROL CENTER (A/B)	78'	Aux.	
319	1-841-E-MC01D-D1	CLASS 1E 125V DC DISTR. PNL 2	78'	Aux.	
320	1-841-E-BC01A	CLASS 1E BATT. CHARGER (A/B)	78'	Aux.	1
321	1-841-E-BC01B	CLASS 1E BATT. CHARGER (A/B)	78'	Aux.	
322	1-841-E-BC01C	CLASS 1E BATT. CHARGER (A/B)	78'	Aux.	
323	1-841-E-BC01D	CLASS 1E BATT. CHARGER (A/B)	78'	Aux.	
324	1-841-E-BC02A	CLASS 1E BATT. CHARGER (STAND-BY) (A/B)	78'	Aux.	
325	1-841-E-BC02B	CLASS 1E BATT. CHARGER (STAND-BY) (A/B)	78'	Aux.	
326	1-841-E-BC02C	CLASS 1E BATT. CHARGER (STAND-BY) (A/B)	78'	Aux.	
327	1-841-E-BC02D	CLASS 1E BATT. CHARGER (STAND-BY) (A/B)	78'	Aux.	

Table 19.1-42A (19 of 19)

No.	Equipment ID	Equipment Description	Floor Elevation	Building	Correlation Factor
328	1-841-E-BT01A	CLASS 1E 125V DC BATTERY	100'	Aux.	1
329	1-841-E-BT01B	CLASS 1E 125V DC BATTERY	100'	Aux.	
330	1-841-E-BT01C	CLASS 1E 125V DC BATTERY	78'	Aux.	1
331	1-841-E-BT01D	CLASS 1E 125V DC BATTERY	78'	Aux.	
332	1-842-E-IN01A	CLASS 1E CH.A 40KVA INVERTER (A/B)	78'	Aux.	1
333	1-842-E-IN01B	CLASS 1E CH.A 40KVA INVERTER (A/B)	78'	Aux.	
334	1-842-E-IN01C	CLASS 1E CH.C 40KVA INVERTER (A/B)	78'	Aux.	
335	1-842-E-IN01D	CLASS 1E CH.C 40KVA INVERTER (A/B)	78'	Aux.	
336	1-842-E-IN02A	CLASS 1E SAFETY MOV INVERTER (RC SYS ONLY)	78'	Aux.	1
337	1-842-E-IN02B	CLASS 1E SAFETY MOV INVERTER 30KVA	78'	Aux.	
338	1-842-E-IN02C	CLASS 1E SAFETY MOV INVERTER	78'	Aux.	
339	1-842-E-IN02D	CLASS 1E SAFETY MOV INVERTER 30KVA	78'	Aux.	
340	1-842-E-TR01A	CLASS 1E REGULATING TRANSFORMER	78'	Aux.	1
341	1-842-E-TR01B	CLASS 1E REGULATING TRANSFORMER	78'	Aux.	
342	1-842-E-TR01C	CLASS 1E REGULATING TRANSFORMER	78'	Aux.	
343	1-842-E-TR01D	CLASS 1E REGULATING TRANSFORMER	78'	Aux.	

Table 19.1-43A (1 of 5)

LPSD Seismic Fragility Analysis Results Summary

Component	Location	Failure mode	HCLPF (g)
Buildings			
Reactor Containment building	CTMT	Tan. shear fail near the base	0.94
Stability of NI Structure	CTMT basemat	Sliding toward the turbine building	0.52
Containment Hatch (Open & Stowed)	CTMT	Generic	[1]
Reactor Containment Internal	CTMT	Tan. shear fail near the base	1.09
Auxiliary Building	Auxiliary Building	Shear fail of shear wall at the basemat	0.51
Emergency Diesel Generator Building	Emergency Diesel Generator Building	Shear fail of shear wall at the basemat	0.87
Diesel Fuel Oil Tank Building	Diesel Fuel Oil Tank Building	Shear fail of shear wall at the basemat	0.73
Turbine Building	Turbine Building	Collapse into Aux BLDG	[1]
Compound Building	Compound Building	Collapse into Aux BLDG	[1]
ESWIS	ESW Building	Generic	[5]
CCW Hx Building	CCW Hx Building	Generic	[5]
RCS Components			
Reactor Pressure Vessel	CTMT El. 69'~156'	Column support	0.92
Rx Vessel Head (Removed and Stowed)	CTMT	Movement / Collapse	[1]
Reactor Vessel Internal	CTMT El. 69'~156'	Core Sup. Barrel lower flange	0.51
CEDM (Control Element Drive Mechanism)	CTMT	Binding of control extension shaft	0.64
Steam Generator	CTMT El. 114'~136'06"	Arch. fail of snubber lever support assembly	0.6

Table 19.1-43A (2 of 5)

Component	Location	Failure mode	HCLPF (g)
Steam Generator Nozzle	CTMT El. 114'~136'06"	Economizer nozzle	0.54
Pressurizer	CTMT El. 114'~156'	Skirt support	0.63
Pressurizer nozzle	CTMT El. 114'~156'	Spray nozzle	0.51
Reactor Coolant System Piping	CTMT	Surge line nozzle	0.55
Reactor Coolant Pumps	CTMT El. 114'~136'06"	Upper horizontal column support	1.31
BOP Components (mechanical, electrical and I&C components)			
Charging Pumps	AB El. 55'	Generic	[1]
Regenerative Heat Exchanger	CTMT El. 114'	Generic	[1]
Letdown Heat Exchanger	CTMT El. 100'	Generic	[1]
Auxiliary Charging Pump	AB El. 55'	Generic	[1]
CVCS Letdown Line	CTMT	Line Break	[1]
Safety Injection Tanks	CTMT. El. 136' 06"	Generic	[1]
Shutdown Cooling Pumps	AB El. 50'	Generic	[1]
Shutdown Cooling Heat Exchanger	AB El. 50'	Generic	[1]
SC Pump Miniflow Heat Exchanger	AB El. 50'	Generic	[1]
Safety Injection Pump	AB El. 50'	Generic	[1]
Containment Spray Pump	AB El. 50'	Generic	[1]
CS Miniflow Hx	AB El. 50'	Generic	[1]
Containment Spray Heat Exchanger	AB El. 55'	Generic	[1]
Main Steam Isolation Valves	AB El. 137'06"	Generic	[1]
Main Steam Atmospheric Valves(ADV)	AB El. 137'06"	Generic	[1]
Main Steam Safety Valves	AB El. 137'06"	Generic	[1]
AFW Pump-Motor Driven	AB El. 78'	Generic	[1]
AFW Pump-Turbine Driven	AB El. 78'	Generic	[1]

Table 19.1-43A (3 of 5)

Component	Location	Failure mode	HCLPF (g)
Emergency Diesel Generators	EDG El. 100' AB El. 100'	Generic	[1]
Emergency Diesel Fuel Oil transfer pump	EDG El. 65' AB El. 63'	Generic	[1]
Starting Air Tank	AB El. 100'	Generic	[1]
Diesel Fuel Oil Day Tank	EDG El. 121' AB El. 120'	Generic	[1]
Diesel Fuel Oil Storage Tank	EDG El. 63' Aux. El. 65'	Generic	[1]
Silencer	AB El. 100'	Generic	[1]
Air Intake Filter	AB El. 109'	Generic	[1]
Lube Oil Water Hx	AB El. 100'	Generic	[1]
Motor Driven Fuel Oil Feed Pump	EDG El. 100' AB El. 100'	Generic	[1]
Essential Service Water Pump	ESW IS. El. 69'	Generic	[1]
CCW Heat Exchangers	CCW Hx BLDG El. 100'	Generic	[1]
CCW Pump	AB El. 55'	Generic	[1]
CCW Surge Tank	AB El. 172'	Generic	[1]
Essential Chilled Water Pumps	AB. El. 78'	Generic	[1]
Essential Chillers	AB El. 78'	Generic	[1]
ECW Compression Tank	AB El. 172'	Generic	[1]
ECW Air Separator	AB El. 78'	Generic	[1]
Essential Chilled Water System Control Panel	AB El. 78'	Generic	[1]
AFWP Room Cubicle Cooler-MD	AB El. 78'	Generic	[1]
CCWP Room Cubicle Cooler	AB El. 55'	Generic	[1]
SI Room Cubicle Cooler	AB El. 50' AB El. 55'	Generic	[1]
SC Pump & Mini-flow Hx. Room Cubicle Cooler	AB El. 50' AB El. 55'	Generic	[1]
Mech. Pen. Room Cubicle Cooler	AB El. 100' AB El. 120'	Generic	[1]

Table 19.1-43A (4 of 5)

Component	Location	Failure mode	HCLPF (g)
CS Pump Room Cubicle Cooler	AB El. 50' AB El. 55'	Generic	[1]
Aux Charging Pump Room Cubicle Cooler	AB El. 55'	Generic	[1]
Charging Pump Room Cubicle Cooler	AB El. 55'	Generic	[1]
Elect. Pen. Room Area Cubicle Cooler	AB El. 120' AB El. 137'6"	Generic	[1]
Essential Chiller & Pump Cubicle Cooler	AB El. 78'	Generic	[1]
CCW Hx. Room Supply Fans	CCW Hx B El. 100' CCW Hx El. 126'	Generic	[1]
ESW Pump Room Supply Fan	ESW IS. El. 90'	Generic	[1]
EDG Room Emergency Exhaust Fan	EDG El. 100' AB El. 172'	Generic	[1]
Control Room Emergency Makeup ACU	AB El. 172'	Generic	[1]
ESF-CCS GC Cabinet	AB El. 156'	Generic	[1]
ESF-CCS LC Cabinet	AB El. 156' AB El. 137'6"	Generic	[1]
Plant Protection System Cabinet	AB El. 156'	Generic	[1]
Reactor Trip Switchgear	AB El. 137'6"	Generic	[1]
MCR Operator Consoles	AB El. 156'	Generic	[1]
MCR Safety Consoles	AB El. 156'	Generic	[1]
125V DC Battery Chargers	AB El. 78'	Generic	[1]
SI Inverter	AB El. 78'	Generic	[1]
120V AC Inverter(VBPSS)	AB El. 78'	Generic	[1]
Regulating Transformer	AB El. 78'	Generic	[1]
125V DC Control Center	AB El. 78'	Generic	[1]
4.16kV MCSG	AB El. 78'	Generic	[1]
480V Load Center	AB El. 78'	Generic	[1]
480V MCC(Aux. EL.137'06")	AB El. 137'06"	Generic	[1]

Table 19.1-43A (5 of 5)

Component	Location	Failure mode	HCLPF (g)
480V MCC(Aux. EL.120')	AB El. 120'	Generic	[1]
480V MCC(Aux. EL.100')	AB El. 100'	Generic	[1]
480V MCC(Aux. EL.78')	AB El. 78'	Generic	[1]
480V MCC(ESW IS EL.100')	ESW IS. El. 90'	Generic	[1]
Batteries & Racks	AB El. 78' AB El. 100'	Generic	[1]
Off-Site Power	various	Generic	0.09[3]
Reactor Coolant System	various	Generic	0.3[4]
BOP Piping & Supports	various	Generic	0.75g[2]
HVAC Ducting & Dampers	various	Generic	0.75g[2]
Cable Trays & Supports	various	Generic	0.75g[2]
Motor Operated Valves	various	Generic	0.75g[2]
Air Operated Valves	various	Generic	0.75g[2]
Electrical Conduit	various	Generic	0.75g[2]
Relief and Check Valves	various	Generic	0.75g[2]
Resistance Temperature Detectors	various	Generic	0.75g[2]
Pressure Transmitters	various	Generic	0.75g[2]

Key Assumptions

1. Containment is Open for POS3B, 4A and 13

2. The POSs for the Analysis are POS 3B, 4A, 4B, 5, 6, 10, 11, 12A which are classified as Operation Mode 5

3. For LOCA inside containment, the same mitigation systems are used as those of the full power SMA. The Plant and Sequence Level HCLPF are already evaluated in the FP SMA. Therefore they are not modeled in the LPSD

[1] The component is assigned to COL item (COL 19.1(8)) and HCLPF value is assumed to be equal to or exceed 1.67 times CSDRS

[2] Inherently Ruggedness Item were assumed as $CSDRS \times 2.5 = 0.75g$

- EPRI-1025287 (Reference 78) COL item (COL 19.1(8))

[3] HCLPF based on generic value from Risk Assessment of Operational Events Handbook Volume 2 - External Events, R.1.01, January 2008, USNRC (Reference 79).

[4] HCLPF based on Option 2 in "SPRA implementation guide", EPRI 3002000709 (Reference 77)

[5] ESWIS and CCW HX Building are assigned to COL item (COL 19.1(8)) and HCLPF value is assumed to be equal to or exceed 1.67 times GMRS.

Table 19.1-44E (1 of 10)

LPSD Level 1 Direct Core Damage POS3B4A Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CPD-FAIL-0.5G	SEISMIC FAILURE OF COMPOUND BUILDING COLLAPE INTO AUXILIARY BLDG	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-HATCH-FAIL-0.5G	SEISMIC FAILURE OF THE CONTAINMENT HATCH FALLING OVER FROM STOWED	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-TB-FAIL-0.5G	SEISMIC FAILURE OF THE TURBINE BUILDING COLLAPE INTO AUXILIARY BLDG	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-480V-LC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 480V Load Center	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-480V-MCC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 480V MCC	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DC-BC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 125V DC Battery Chargers	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	

Table 19.1-44E (2 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-ESF-RPS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ESF-CCS GC Cabinet	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-IPINV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 120V AC Inverter(VBPSS)	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-IPREGTR-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Regulating Transformer	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-RP-PM05-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE MCR SAFETY CONSOLE	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SIHX01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Shutdown Cooling Heat Exchanger	
	1.00E+00	SIE-FLAG-ISLOCA-3B4A	FLAG For Seismically-Induced Interface-System Loss of Coolant Accident	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SIHX02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SC Pump Miniflow Heat Exchanger	
	1.00E+00	SIE-FLAG-ISLOCA-3B4A	FLAG For Seismically-Induced Interface-System Loss of Coolant Accident	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SIPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Shutdown Cooling Pumps	
	1.00E+00	SIE-FLAG-ISLOCA-3B4A	FLAG For Seismically-Induced Interface-System Loss of Coolant Accident	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-4KV-BUS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 4.16kV MCSG	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	

Table 19.1-44E (3 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DC-BT-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Batteries & Racks	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DC-MCC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 125V DC Control Center	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DG-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Generators	
	0.5g	SEIS-DG-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Generators (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGFT-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Air Intake Filter	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGHX-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Lube Oil Water Hx	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Motor Driven Fuel Oil Feed Pump	
	0.5g	SEIS-DGPP-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Motor Driven Fuel Oil Feed Pump (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGSL-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Silencer	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	

Table 19.1-44E (4 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGTK40-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Starting Air Tank	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DOMPS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Fuel Oil transfer pump	
	0.5g	SEIS-DOMPS-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Fuel Oil transfer pump (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DOTK01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Storage Tank	
	0.5g	SEIS-DOTK01-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Storage Tank (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DOTK02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Day Tank	
	0.5g	SEIS-DOTK02-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Day Tank (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VGAH02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Exhaust Fan	
	0.5g	SEIS-VGAH02-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Exhaust Fan (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-3B4A	FLAG FOR Seismic-Induced SBO	

Table 19.1-44E (5 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCHX-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Heat Exchangers	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-ACVPP-0.5G	SEISMIC INDUCED FAILURE OF THE Aux Charging Pump Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EPA-0.5G	SEISMIC INDUCED FAILURE OF THE Elect. Pen. Room Area Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-MPR-0.5G	SEISMIC INDUCED FAILURE OF THE Mech. Pen. Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Pump	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCTK-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Surge Tank	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCW-BLDG-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Hx Building	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	

Table 19.1-44E (6 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSHX01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Heat Exchanger	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSHX02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CS Miniflow Hx	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-ESWIS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ESWIS	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SXPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Service Water Pump	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VGAH-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ESW Pump Room Supply Fan	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV10-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CS Pump Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV11/12-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV13/14-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCWP Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	

Table 19.1-44E (7 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV16-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SC Pump & Mini-flow Hx. Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV18-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Charging Pump Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VOHV32-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chiller & Pump Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VOHV33-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFWP Room Cubicle Cooler-MD	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOCH-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chillers	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOLP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chilled Water System Control Panel	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chilled Water Pumps	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	

Table 19.1-44E (8 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOTK02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ECW Air Separator	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOTK-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ECW Compression Tank	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EPA-137-0.5G	SEISMIC INDUCED FAILURE OF THE Elect. Pen. Room Area Cubicle Cooler (EL.137')	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-IC-0.5G	SEISMIC INDUCED FAILURE OF THE I&C Eq. Room Cubicle Cooler (EL.157')	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EDG-100-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Cubicle Cooler (EL.100')	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EDG-135-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Cubicle Cooler (EL.135')	
	1.00E+00	SIE-FLAG-TLOCCW-3B4A	FLAG FOR Seismic-Induced TLOCCW	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.51g
	0.51g	SEIS-RVI-RCS-0.51G	SEISMIC INDUCED RX VESSESL INTERNAL FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	

Table 19.1-44E (9 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.51g
	0.51g	SEIS-AB-FAIL-0.51G	SEISMIC FAILURE OF AUXILIARY BUILDING	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.52g
	0.52g	SEIS-NI-FAIL-0.52G	SEISMICALLY-INDUCED SG SUPPORT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.6g
	0.6g	SEIS-SG-RCS-FAIL-0.6G	SEISMICALLY-INDUCED SG SUPPORT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.63g
	0.63g	SEIS-PZR-RCS-FAIL-0.63G	SEISMICALLY-INDUCED PZR SKIRT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.75g
	0.75g	SEIS-ALL-SSC-0.75G	Generic Seismic Equipment Failure all equipment correlated to failure at 0.75g HCLPF	
	1.00E+00	SIE-FLAG-IC-3B4A	FLAG FOR Loss of All Instrumentation and Control	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.92g
	0.92g	SEIS-RV-RCS-FAIL-0.92G	SEISMICALLY-INDUCED REACTOR VESSEL FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	

Table 19.1-44E (10 of 10)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.94g
	0.94g	SEIS-CTS-EX-FAIL-0.94G	SEISMIC FAILURE OF CONTAINMENT EXTERIOR	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	1.09g
	1.09g	SEIS-CTS-IN-FAIL-1.09G	SEISMIC FAILURE OF CONTAINMENT INTERNAL STRUCTURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	1.31g
	1.31g	SEIS-RCP-RCS-FAIL-1.31G	SEISMICALLY-INDUCED RCP SUPPORT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	

Table 19.1-44F (1 of 12)

LPSD Level 1 Direct Core Damage POS4B12A Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CPD-FAIL-0.5G	SEISMIC FAILURE OF COMPOUND BUILDING COLLAPSE INTO AUXILIARY BLDG	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-TB-FAIL-0.5G	SEISMIC FAILURE OF THE TURBINE BUILDING COLLAPSE INTO AUXILIARY BLDG	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VESS-HEAD-FAIL-0.5G	SEISMIC FAILURE OF THE VESSEL HEAD MOVING FROM STOWED POSITION	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-480V-LC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 480V Load Center	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-480V-MCC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 480V MCC	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	

Table 19.1-44F (2 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DC-BC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 125V DC Battery Chargers	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-ESF-RPS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ESF-CCS GC Cabinet	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-IPINV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 120V AC Inverter(VBPSS)	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-IPREGTR-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Regulating Transformer	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-RP-PM05-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE MCR SAFETY CONSOLE	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SIHX01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Shutdown Cooling Heat Exchanger	
	1.00E+00	SIE-FLAG-ISLOCA-4B12A	FLAG For Seismically-Induced Interface-System Loss of Coolant Accident	

Table 19.1-44F (3 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SIHX02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SC Pump Miniflow Heat Exchanger	
	1.00E+00	SIE-FLAG-ISLOCA-4B12A	FLAG For Seismically-Induced Interface-System Loss of Coolant Accident	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SIPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Shutdown Cooling Pumps	
	1.00E+00	SIE-FLAG-ISLOCA-4B12A	FLAG For Seismically-Induced Interface-System Loss of Coolant Accident	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-4KV-BUS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 4.16kV MCSG	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DC-BT-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Batteries & Racks	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DC-MCC-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE 125V DC Control Center	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	

Table 19.1-44F (4 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DG-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Generators	
	0.5g	SEIS-DG-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Generators (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGFT-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Air Intake Filter	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGHX-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Lube Oil Water Hx	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Motor Driven Fuel Oil Feed Pump	
	0.5g	SEIS-DGPP-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Motor Driven Fuel Oil Feed Pump (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGSL-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Silencer	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	

Table 19.1-44F (5 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DGTK40-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Starting Air Tank	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DOMPS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Fuel Oil transfer pump	
	0.5g	SEIS-DOMPS-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Emergency Diesel Fuel Oil transfer pump (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DOTK01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Storage Tank	
	0.5g	SEIS-DOTK01-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Storage Tank (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-DOTK02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Day Tank	
	0.5g	SEIS-DOTK02-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Diesel Fuel Oil Day Tank	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	

Table 19.1-44F (6 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VGAH02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Exhaust Fan	
	0.5g	SEIS-VGAH02-CD-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Exhaust Fan (Aux. Building)	
	1.00E+00	SIE-FLAG-SBO-4B12A	FLAG FOR Seismic-Induced SBO	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCHX-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Heat Exchangers	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-ACVPP-0.5G	SEISMIC INDUCED FAILURE OF THE Aux Charging Pump Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EPA-0.5G	SEISMIC INDUCED FAILURE OF THE Elect. Pen. Room Area Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-MPR-0.5G	SEISMIC INDUCED FAILURE OF THE Mech. Pen. Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Pump	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	

Table 19.1-44F (7 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCTK-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Surge Tank	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCW-BLDG-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCW Hx Building	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSHX01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Heat Exchanger	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSHX02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CS Miniflow Hx	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-ESWIS-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ESWIS	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-SXPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Service Water Pump	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	

Table 19.1-44F (8 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VGAH-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ESW Pump Room Supply Fan	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV10-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CS Pump Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV11/12-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV13/14-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE CCWP Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV16-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SC Pump & Mini-flow Hx. Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VKHV18-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Charging Pump Room Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	

Table 19.1-44F (9 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VOHV32-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chiller & Pump Cubicle Cooler	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-VOHV33-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFWP Room Cubicle Cooler-MD	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOCH-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chillers	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOLP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chilled Water System Control Panel	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOPP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Essential Chilled Water Pumps	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOTK02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ECW Air Separator	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	

Table 19.1-44F (10 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-WOTK-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE ECW Compression Tank	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EPA-137-0.5G	SEISMIC INDUCED FAILURE OF THE Elect. Pen. Room Area Cubicle Cooler (EL.137')	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-IC-0.5G	SEISMIC INDUCED FAILURE OF THE I&C Eq. Room Cubicle Cooler (EL.157')	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EDG-100-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Cubicle Cooler (EL.100')	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CCLR-EDG-135-0.5G	SEISMIC INDUCED FAILURE OF THE EDG Room Emergency Cubicle Cooler (EL.135')	
	1.00E+00	SIE-FLAG-TLOCCW-4B12A	FLAG FOR Seismic-Induced TLOCCW	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.51g
	1.00E+00	SEIS-RVI-RCS-0.51G	SEISMIC INDUCED RX VESSESL INTERNAL FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	

Table 19.1-44F (11 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.51g
	0.51g	SEIS-AB-FAIL-0.51G	SEISMIC FAILURE OF AUXILIARY BUILDING	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.52g
	0.52g	SEIS-NI-FAIL-0.52G	SEISMICALLY-INDUCED SG SUPPORT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-3B4A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.6g
	0.6g	SEIS-SG-RCS-FAIL-0.6G	SEISMICALLY-INDUCED SG SUPPORT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.63g
	0.63g	SEIS-PZR-RCS-FAIL-0.63G	SEISMICALLY-INDUCED PZR SKIRT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.75g
	0.75g	SEIS-ALL-SSC-0.75G	Generic Seismic Equipment Failure all equipment correlated to failure at 0.75g HCLPF	
	1.00E+00	SIE-FLAG-IC-4B12A	FLAG FOR Loss of All Instrumentation and Control	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.92g
	0.92g	SEIS-RV-RCS-FAIL-0.92G	SEISMICALLY-INDUCED REACTOR VESSEL FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	

Table 19.1-44F (12 of 12)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.94g
	0.94g	SEIS-CTS-EX-FAIL-0.94G	SEISMIC FAILURE OF CONTAINMENT EXTERIOR	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	1.09g
	1.09g	SEIS-CTS-IN-FAIL-1.09G	SEISMIC FAILURE OF CONTAINMENT INTERNAL STRUCTURE	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	1.31g
	1.31g	SEIS-RCP-RCS-FAIL-1.31G	SEISMICALLY-INDUCED RCP SUPPORT FAILURE	
	1.00E+00	SIE-FLAG-DMG-CF-4B12A	FLAG FOR Seismic Events Leading to Direct Core Damage with Containment Structural Damage	

Table 19.1-44G (1 of 34)

LPSD Level 1 Non-Direct Core Damage POS3B Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44G (2 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP03B-02	Operator Fails to Isolate JL at POS 3B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (3 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (4 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-SG-JLP03B-02	Failure to Remove Steam during JL at POS 3B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (5 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44G (6 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44G (7 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44G (8 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP03B-01	Operator Fails to Isolate JL at POS 3B w/makeup established	
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (9 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP03B-02	Operator Fails to Isolate JL at POS 3B w/makeup failed	
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	1.00E-01	HR-SG-JLP03B-02	Failure to Remove Steam during JL at POS 3B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-RS-JLP03B	Operator Fails to Restore SCS during JL POS 3B	
	1.00E-01	HR-SG-JLP03B-01	Failure to Remove Steam during JL at POS 3B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (10 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (11 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (12 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (13 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44G (14 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP03B	Operator Fails to Restore SCS during LP POS 3B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP03B	Operator Fails to Restore SCS during LP POS 3B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP03B	Operator Fails to Restore SCS during LP POS 3B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (15 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP03B	Operator Fails to Restore SCS during LP POS 3B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP03B	Operator Fails to Restore SCS during LP POS 3B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP03B	Operator Fails to Restore SCS during LP POS 3B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44G (16 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	

Table 19.1-44G (17 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	

Table 19.1-44G (18 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-IL-JLP03B-01	Operator Fails to Isolate JL at POS 3B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-SG-JLP03B-01	Failure to Remove Steam during JL at POS 3B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-SG-JLP03B-02	Failure to Remove Steam during JL at POS 3B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (19 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44G (20 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44G (21 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	

Table 19.1-44G (22 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (23 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	

Table 19.1-44G (24 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	

Table 19.1-44G (25 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP03B-01	Operator Fails to F&B during JL POS 3B (LTOP re-closed)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44G (26 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44G (27 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP03B-01	Operator Fails to Isolate JL at POS 3B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-SG-JLP03B-01	Failure to Remove Steam during JL at POS 3B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-SG-JLP03B-02	Failure to Remove Steam during JL at POS 3B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44G (28 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	

Table 19.1-44G (29 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	1.00E-01	HR-IL-JLP03B-02	Operator Fails to Isolate JL at POS 3B w/makeup failed	
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP03B-02	Operator Fails to F&B during JL POS 3B (LTOP stuck open)	
	1.00E-01	HR-MK-JLP03B	Operator Fails to Makeup Inventory during JL POS 3B	
	1.00E-01	HR-SG-JLP03B-02	Failure to Remove Steam during JL at POS 3B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (30 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44G (31 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	

Table 19.1-44G (32 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	

Table 19.1-44G (33 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	

Table 19.1-44G (34 of 34)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	

Table 19.1-44H (1 of 33)

LPSD Level 1 Non-Direct Core Damage POS4A Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44H (2 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP04A-02	Operator Fails to Isolate JL at POS 4A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (3 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (4 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-SG-JLP04A-02	Failure to Remove Steam during JL at POS 4A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (5 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44H (6 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44H (7 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44H (8 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP04A-01	Operator Fails to Isolate JL at POS 4A w/makeup established	
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (9 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP04A-02	Operator Fails to Isolate JL at POS 4A w/makeup failed	
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-MK-JLP04A	Operator Fails to Makeup Inventory during JL POS 4A	
	1.00E-01	HR-SG-JLP04A-02	Failure to Remove Steam during JL at POS 4A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-RS-JLP04A	Operator Fails to Restore SCS during JL POS 4A	
	1.00E-01	HR-SG-JLP04A-01	Failure to Remove Steam during JL at POS 4A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (10 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (11 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (12 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (13 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

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No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP04A	Operator Fails to Restore SCS during LP POS 4A	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP04A	Operator Fails to Restore SCS during LP POS 4A	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP04A	Operator Fails to Restore SCS during LP POS 4A	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP04A	Operator Fails to Restore SCS during LP POS 4A	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44H (15 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP04A	Operator Fails to Restore SCS during LP POS 4A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-RS-LPP04A	Operator Fails to Restore SCS during LP POS 4A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44H (16 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44H (17 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-IL-JLP04A-01	Operator Fails to Isolate JL at POS 4A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (18 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-SG-JLP04A-01	Failure to Remove Steam during JL at POS 4A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-SG-JLP04A-02	Failure to Remove Steam during JL at POS 4A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44H (19 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44H (20 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	

Table 19.1-44H (21 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (22 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	

Table 19.1-44H (23 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	

Table 19.1-44H (24 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44H (25 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP04A-01	Operator Fails to F&B during JL POS 4A (LTOP re-closed)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44H (26 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	1.00E-01	HR-FB-JLP04A-02	Operator Fails to F&B during JL POS 4A (LTOP stuck open)	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-IL-JLP04A-01	Operator Fails to Isolate JL at POS 4A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44H (27 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-SG-JLP04A-01	Failure to Remove Steam during JL at POS 4A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-SG-JLP04A-02	Failure to Remove Steam during JL at POS 4A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	

Table 19.1-44H (28 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (29 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	

Table 19.1-44H (30 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	

Table 19.1-44H (31 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.54g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.54g	SEIS-SGNOZZ-RCS-FAIL-0.54G	SEISMIC INDUCED FAILURE OF THE Steam Generator Nozzle	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	

Table 19.1-44H (32 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFMP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Motor Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	

Table 19.1-44H (33 of 33)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-AFTP-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE AFW Pump-Turbine Driven	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SI-INV-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE SI INVERTER	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	

Table 19.1-44I (1 of 28)

LPSD Level 1 Non-Direct Core Damage POS4B Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	1.00E-01	HR-RS-JLP04B	Operator Fails to Restore SCS during JL POS 4B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44I (2 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	1.00E-01	HR-MI-JLP04B	Operator Fails to Isolate and Makeup JL at POS 4B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (3 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44I (4 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (5 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44I (6 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.63E-04	SIMVO2B-346	IRWST SUC. PATH B MOV V346 FAILS TO OPEN	

Table 19.1-44I (7 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	

Table 19.1-44I (8 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (9 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.53E-04	SIVVT2B-V269	SC PUMP 2 MINI. FLOW LINE MANUAL VALVE 269 FAILS TO REMAIN OPEN	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44I (10 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	

Table 19.1-44I (11 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44I (12 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44I (13 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.66E-04	SXCTR-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO CONTINUE TO RUN	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

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No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	

Table 19.1-44I (15 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.35E-04	VGAHR1B-AH01B	FAILS TO RUN ESW PUMP ROOM II. FAN AH01B	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.23E-04	SIMPL1B-SCPP01B	FAILS TO RUN FOR 1HR SC PUMP PP01B	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	

Table 19.1-44I (16 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44I (17 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PAGXY-B-PM3-PA03B-P	FAILURE OF PRIMARY GROUP CONTROLLER OF PA03B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PALXY-D-PA06D-P	PRIMARY LOOP CONTROLLER PA06D FAILS TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (18 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX01B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX02B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX02B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX05B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX05B-P	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (19 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.48E-05	WOLPY1B-CH01B	FAILURE OF ACTUATING CIRCUIT ECW CHILLER CH01B	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (20 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	CCVVT-B-V1292	EDG01B OUTLET MANUAL VALVE V1292 TRANSFER CLOSED	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1002B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1002B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (21 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1009B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1009B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1010B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1010B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1015B	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V1015B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44I (22 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V4011B	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V4011B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT2B-V107	SCS PUMP 2 SUCTION MANUAL VALVE V107 TRANSFER CLOSED	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT2B-V579	SC PUMP 2 DISCH. PATH MANUAL VALVE V579 FAILS TO REMAIN OPEN	

Table 19.1-44I (23 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VKHVR1B-HV13B	FAILS TO RUN CCW PUMP ROOM CUBICLE COOLER HV13B	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VOHVR1B-HV31B	FAILS TO RUN ECW ROOM B CUBICLE COOLER HV31B	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B	

Table 19.1-44I (24 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	8.47E-05	CCMPR1B-PP01B	FAILS TO RUN CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	SXMPR1B-PP01B	FAILS TO RUN ESW PUMP PP01B	

Table 19.1-44I (25 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	WOMPR1B-PP01B	FAILS TO RUN ECW PUMP 01B	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	

Table 19.1-44I (26 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	

Table 19.1-44I (27 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-01	Operator Fails to Feed during JL POS 4B w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	

Table 19.1-44I (28 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP04B-02	Operator Fails to Feed during JL POS 4B w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44J (1 of 26)

LPSD Level 1 Non-Direct Core Damage POS5 Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	1.00E-01	HR-RS-JLP05	Operator Fails to Restore SCS during JL POS 5	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	1.00E-01	HR-MI-JLP05	Operator Fails to Isolate and Makeup JL at POS 5	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44J (2 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44J (3 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44J (4 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	

Table 19.1-44J (5 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (6 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.63E-04	SIMVO2B-346	IRWST SUC. PATH B MOV V346 FAILS TO OPEN	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	

Table 19.1-44J (7 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (8 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.53E-04	SIVVT2B-V269	SC PUMP 2 MINI. FLOW LINE MANUAL VALVE 269 FAILS TO REMAIN OPEN	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

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No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

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No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44J (11 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44J (12 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.66E-04	SXCTR-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO CONTINUE TO RUN	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44J (13 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	

Table 19.1-44J (14 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.35E-04	VGAHR1B-AH01B	FAILS TO RUN ESW PUMP ROOM II. FAN AH01B	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.23E-04	SIMPL1B-SCPP01B	FAILS TO RUN FOR 1HR SC PUMP PP01B	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	

Table 19.1-44J (15 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44J (16 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PAGXY-B-PM3-PA03B-P	FAILURE OF PRIMARY GROUP CONTROLLER OF PA03B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PALXY-D-PA06D-P	PRIMARY LOOP CONTROLLER PA06D FAILS TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX01B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX02B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX02B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (17 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX05B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX05B-P	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.48E-05	WOLPY1B-CH01B	FAILURE OF ACTUATING CIRCUIT ECW CHILLER CH01B	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	

Table 19.1-44J (18 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	CCVVT-B-V1292	EDG01B OUTLET MANUAL VALVE V1292 TRANSFER CLOSED	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1002B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1002B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (19 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1009B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1009B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1010B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1010B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1015B	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V1015B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (20 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V4011B	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V4011B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT2B-V107	SCS PUMP 2 SUCTION MANUAL VALVE V107 TRANSFER CLOSED	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT2B-V579	SC PUMP 2 DISCH. PATH MANUAL VALVE V579 FAILS TO REMAIN OPEN	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VKHVR1B-HV13B	FAILS TO RUN CCW PUMP ROOM CUBICLE COOLER HV13B	

Table 19.1-44J (21 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VOHVR1B-HV31B	FAILS TO RUN ECW ROOM B CUBICLE COOLER HV31B	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	8.47E-05	CCMPR1B-PP01B	FAILS TO RUN CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (22 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	SXMPR1B-PP01B	FAILS TO RUN ESW PUMP PP01B	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	WOMPR1B-PP01B	FAILS TO RUN ECW PUMP 01B	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (23 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	

Table 19.1-44J (24 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	

Table 19.1-44J (25 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-01	Operator Fails to Feed during JL POS 5 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP05-02	Operator Fails to Feed during JL POS 5 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44J (26 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44K (1 of 26)

LPSD Level 1 Non-Direct Core Damage POS6 Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	1.00E-01	HR-RS-JLP06	Operator Fails to Restore SCS during JL POS 6	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	1.00E-01	HR-MI-JLP06	Operator Fails to Isolate and Makeup JL at POS 6	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44K (2 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44K (3 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44K (4 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	

Table 19.1-44K (5 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (6 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.63E-04	SIMVO2B-346	IRWST SUC. PATH B MOV V346 FAILS TO OPEN	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	

Table 19.1-44K (7 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (8 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.53E-04	SIVVT2B-V269	SC PUMP 2 MINI. FLOW LINE MANUAL VALVE 269 FAILS TO REMAIN OPEN	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44K (9 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44K (10 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44K (11 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44K (12 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.66E-04	SXCTR-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO CONTINUE TO RUN	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44K (13 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	

Table 19.1-44K (14 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.35E-04	VGAHR1B-AH01B	FAILS TO RUN ESW PUMP ROOM II. FAN AH01B	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.23E-04	SIMPL1B-SCPP01B	FAILS TO RUN FOR 1HR SC PUMP PP01B	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	

Table 19.1-44K (15 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

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No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PAGXY-B-PM3-PA03B-P	FAILURE OF PRIMARY GROUP CONTROLLER OF PA03B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PALXY-D-PA06D-P	PRIMARY LOOP CONTROLLER PA06D FAILS TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX01B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX02B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX02B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (17 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-B-LX05B-P	FAILURE OF PRIMARY LOOP CONTROLLER LX05B-P	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.48E-05	WOLPY1B-CH01B	FAILURE OF ACTUATING CIRCUIT ECW CHILLER CH01B	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	

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No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	CCVVT-B-V1292	EDG01B OUTLET MANUAL VALVE V1292 TRANSFER CLOSED	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1002B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1002B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (19 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1009B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1009B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1010B	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1010B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V1015B	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V1015B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (20 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-B-V4011B	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V4011B FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT2B-V107	SCS PUMP 2 SUCTION MANUAL VALVE V107 TRANSFER CLOSED	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT2B-V579	SC PUMP 2 DISCH. PATH MANUAL VALVE V579 FAILS TO REMAIN OPEN	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VKHVR1B-HV13B	FAILS TO RUN CCW PUMP ROOM CUBICLE COOLER HV13B	

Table 19.1-44K (21 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VOHVR1B-HV31B	FAILS TO RUN ECW ROOM B CUBICLE COOLER HV31B	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	8.47E-05	CCMPR1B-PP01B	FAILS TO RUN CCW PUMP PP01B	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (22 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	SXMPR1B-PP01B	FAILS TO RUN ESW PUMP PP01B	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	WOMPR1B-PP01B	FAILS TO RUN ECW PUMP 01B	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (23 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	

Table 19.1-44K (24 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	

Table 19.1-44K (25 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-01	Operator Fails to Feed during JL POS 6 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP06-02	Operator Fails to Feed during JL POS 6 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44K (26 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44L (1 of 26)

LPSD Level 1 Non-Direct Core Damage POS10 Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	1.00E-01	HR-RS-JLP10	Operator Fails to Restore SCS during JL POS 10	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	1.00E-01	HR-MI-JLP10	Operator Fails to Isolate and Makeup JL at POS 10	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44L (2 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.00E-03	SIOPU1A-V265	OPERATOR ERROR: SC PUMP PP01A MINI FLOW VV 265 NOT RESTORED AFTER T&M	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44L (3 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44L (4 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO START	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1A-PP01A	FAILS TO START CCW PUMP PP01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44L (5 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1A-PP01A	FAIL TO START ESW PUMP PP01A	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1A-PP01A	FAILS TO START OF ECW PUMP 01A	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	

Table 19.1-44L (6 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1A-071	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1A SXCT SUPPLY HOV SX-071	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.63E-04	SIMVO1A-344	IRWST SUC. PATH A MOV V344 FAILS TO OPEN	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	

Table 19.1-44L (7 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1A-HV13A	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13A	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1A-HV31A	FAILS TO START ECW ROOM CUBICLE COOLER HV31A	

Table 19.1-44L (8 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1A-CH01A	FAILS TO RUN ECW CHILLER CH01A FOR 24 HOURS	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44L (9 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.53E-04	SIVVT1A-V265	SC PUMP 1 MINI. FLOW LINE MANUAL VALVE 265 FAILS TO REMAIN OPEN	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44L (10 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44L (11 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP10	Operator Fails to Feed during LP POS 10	
	1.00E-01	HR-RS-LPP10	Operator Fails to Restore SCS during LP POS 10	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44L (12 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.32E-03	SXCTS-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO START	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44L (13 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.66E-04	SXCTR-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO CONTINUE TO RUN	

Table 19.1-44L (14 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1A-PP01A	FAILS TO START CCW PUMP PP01A	
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1A-PP01A	FAILS TO START CCW PUMP PP01A	
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1A-PP01A	FAIL TO START ESW PUMP PP01A	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1A-PP01A	FAILS TO START OF ECW PUMP 01A	

Table 19.1-44L (15 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	SXMPS1A-PP01A	FAIL TO START ESW PUMP PP01A	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.36E-03	WOMPS1A-PP01A	FAILS TO START OF ECW PUMP 01A	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.35E-04	VGAHR1A-AH01A	FAILS TO RUN ESW PUMP ROOM I. FAN AH01A	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.23E-04	SIMPL1A-SCPP01A	FAILS TO RUN FOR 1HR SC PUMP PP01A	

Table 19.1-44L (16 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1A-071	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1A SXCT SUPPLY HOV SX-071	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	1.20E-03	SXHVO-1A-071	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1A SXCT SUPPLY HOV SX-071	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44L (17 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PAGXY-A-PM3-PA03A-P	FAILURE OF PRIMARY GROUP CONTROLLER OF PA03A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PALXY-C-PA06C-P	PRIMARY LOOP CONTROLLER PA06C FAILS TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44L (18 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-A-LX01A-P	FAILURE OF PRIMARY LOOP CONTROLLER LX01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-A-LX05A-P	FAILURE OF PRIMARY LOOP CONTROLLER 745-LX05A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.48E-05	WOLPY1A-CH01A	FAILURE OF ACTUATING CIRCUIT ECW CHILLER CH01A	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	

Table 19.1-44L (19 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	CCVVT-A-V1291	EDG01A OUTLET MANUAL VALVE V1291 TRANSFER CLOSED	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44L (20 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1002A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1002A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1009A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1009A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1010A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1010A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44L (21 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1015A	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V1015A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V4011A	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V4011A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT1A-V106	SC PUMP1 (PP01A) SUC. LINE MANUAL VALVE V106 FAILS TO REMAIN OPEN	

Table 19.1-44L (22 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT1A-V578	SC PUMP1 (PP01A) DISCH. PATH MANUAL VALVE V578 FAILS TO REMAIN OPEN	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VKHVR1A-HV13A	FAILS TO RUN CCW PUMP ROOM CUBICLE COOLER HV13A	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.12E-05	VOHVR1A-HV31A	FAILS TO RUN ECW ROOM CUBICLE COOLER HV31A	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44L (23 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	8.47E-05	CCMPR1A-PP01A	FAILS TO RUN CCW PUMP PP01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	SXMPR1A-PP01A	FAILS TO RUN ESW PUMP PP01A	

Table 19.1-44L (24 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.47E-05	WOMPR1A-PP01A	FAILS TO RUN ECW PUMP 01A	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44L (25 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1A-HV13A	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13A	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-01	Operator Fails to Feed during JL POS 10 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VOHVS1A-HV31A	FAILS TO START ECW ROOM CUBICLE COOLER HV31A	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44L (26 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP10-02	Operator Fails to Feed during JL POS 10 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VKHVS1A-HV13A	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13A	

Table 19.1-44M (1 of 27)

LPSD Level 1 Non-Direct Core Damage POS11 Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	1.00E-01	HR-RS-JLP11	Operator Fails to Restore SCS during JL POS 11	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	1.00E-01	HR-MI-JLP11	Operator Fails to Isolate and Makeup JL at POS 11	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44M (2 of 27)

No .	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.00E-03	SIOPU1A-V265	OPERATOR ERROR: SC PUMP PP01A MINI FLOW VV 265 NOT RESTORED AFTER T&M	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (3 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44M (4 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (5 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.63E-04	SIMVO1A-344	IRWST SUC. PATH A MOV V344 FAILS TO OPEN	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44M (6 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (7 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.53E-04	SIVVT1A-V265	SC PUMP 1 MINI. FLOW LINE MANUAL VALVE 265 FAILS TO REMAIN OPEN	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44M (8 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-C-DGC	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01C	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44M (9 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44M (10 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
	1.30E-02	WOCHS2A-CH02A	FAILS TO START ECW CHILLER CH02A	

Table 19.1-44M (11 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.23E-04	SIMPL1A-SCPP01A	FAILS TO RUN FOR 1HR SC PUMP PP01A	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44M (12 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PAGXY-A-PM3-PA03A-P	FAILURE OF PRIMARY GROUP CONTROLLER OF PA03A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (13 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PALXY-C-PA06C-P	PRIMARY LOOP CONTROLLER PA06C FAILS TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-A-LX01A-P	FAILURE OF PRIMARY LOOP CONTROLLER LX01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-A-LX05A-P	FAILURE OF PRIMARY LOOP CONTROLLER 745-LX05A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	

Table 19.1-44M (14 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	CCVVT-A-V1291	EDG01A OUTLET MANUAL VALVE V1291 TRANSFER CLOSED	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (15 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1002A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1002A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1009A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1009A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1010A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1010A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (16 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1015A	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V1015A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V4011A	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V4011A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT1A-V106	SC PUMP1 (PP01A) SUC. LINE MANUAL VALVE V106 FAILS TO REMAIN OPEN	

Table 19.1-44M (17 of 27)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT1A-V578	SC PUMP1 (PP01A) DISCH. PATH MANUAL VALVE V578 FAILS TO REMAIN OPEN	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A	

Table 19.1-44M (18 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO2A-SW01C-C2	PCB SW01C-C2 4.16KV SWGR SW01C FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44M (19 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-01	Operator Fails to Feed during JL POS 11 w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP11-02	Operator Fails to Feed during JL POS 11 w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (20 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	6.80E-05	WOCHWQ2-CH01A/2A	2/4 CCF OF ECW CHILLERS 1A/2A FAIL TO START	

Table 19.1-44M (21 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PADOY-C-PA06C04	FAILURE OF DIGITAL OUTPUT MODULE PA06C BRANCH 04	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PADOY-D-PA06C02	FAILURE OF DIGITAL OUTPUT MODULE PA06C BRANCH 02	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDOY-A-LX01A02	FAILURE OF DIGITAL OUTPUT MODULE LX01A BRANCH 02	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (22 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDDY-A-LX01A03	FAILURE OF DIGITAL OUTPUT MODULE LX01A BRANCH 03	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDDY-A-LX05A03	FAILURE OF DIGITAL OUTPUT MODULE LX05A BRANCH 03	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDDY-C-LX03C01	FAILURE OF DIGITAL OUTPUT MODULE LX03C BRANCH 01	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44M (23 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAB	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B FAIL TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAB	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAC	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1C FAIL TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (24 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAD	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1D FAIL TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-C-DGC	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01C	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO START	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44M (25 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	

Table 19.1-44M (26 of 27)

No	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AC	2/4 CCF OF EDG 01A/01C FAIL TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AD	2/4 CCF OF EDG 01A/01D FAIL TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44M (27 of 27)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-C-DGC	DG 01C FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-C-LOADSQ	LOAD SEQUENCER C FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	

Table 19.1-44N (1 of 28)

LPSD Level 1 Non-Direct Core Damage POS12A Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	1.00E-01	HR-RS-JLP12A	Operator Fails to Restore SCS during JL POS 12A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	1.00E-01	HR-MI-JLP12A	Operator Fails to Isolate and Makeup JL at POS 12A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44N (2 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.00E-03	SIOPU1A-V265	OPERATOR ERROR: SC PUMP PP01A MINI FLOW VV 265 NOT RESTORED AFTER T&M	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (3 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	

Table 19.1-44N (4 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44N (5 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.63E-04	SIMVO1A-344	IRWST SUC. PATH A MOV V344 FAILS TO OPEN	

Table 19.1-44N (6 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	

Table 19.1-44N (7 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.53E-04	SIVVT1A-V265	SC PUMP 1 MINI. FLOW LINE MANUAL VALVE 265 FAILS TO REMAIN OPEN	

Table 19.1-44N (8 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44N (9 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-C-DGC	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01C	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44N (10 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44N (11 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
	1.30E-02	WOCHS2A-CH02A	FAILS TO START ECW CHILLER CH02A	

Table 19.1-44N (12 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.23E-04	SIMPL1A-SCPP01A	FAILS TO RUN FOR 1HR SC PUMP PP01A	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	

Table 19.1-44N (13 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PAGXY-A-PM3-PA03A-P	FAILURE OF PRIMARY GROUP CONTROLLER OF PA03A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (14 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PALXY-C-PA06C-P	PRIMARY LOOP CONTROLLER PA06C FAILS TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-A-LX01A-P	FAILURE OF PRIMARY LOOP CONTROLLER LX01A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.48E-05	PELXY-A-LX05A-P	FAILURE OF PRIMARY LOOP CONTROLLER 745-LX05A	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	

Table 19.1-44N (15 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	CCVVT-A-V1291	EDG01A OUTLET MANUAL VALVE V1291 TRANSFER CLOSED	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (16 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1002A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1002A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1009A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1009A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1010A	DIESEL FUEL OIL TRANSFER PUMP SUCTION VALVE V1010A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (17 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V1015A	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V1015A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.22E-05	DOVVT-A-V4011A	DIESEL FUEL OIL TRANSFER PUMP DISCH. VALVE V4011A FAILS TO REMAIN OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT1A-V106	SC PUMP1 (PP01A) SUC. LINE MANUAL VALVE V106 FAILS TO REMAIN OPEN	

Table 19.1-44N (18 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.22E-05	SIVVT1A-V578	SC PUMP1 (PP01A) DISCH. PATH MANUAL VALVE V578 FAILS TO REMAIN OPEN	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.74E-05	VDHVR-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A	

Table 19.1-44N (19 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO2A-SW01C-C2	PCB SW01C-C2 4.16KV SWGR SW01C FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44N (20 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-01	Operator Fails to Feed during JL POS 12A w/makeup established	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-JLP12A-02	Operator Fails to Feed during JL POS 12A w/makeup failed	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (21 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	6.80E-05	WOCHWQ2-CH01A/2A	2/4 CCF OF ECW CHILLERS 1A/2A FAIL TO START	

Table 19.1-44N (22 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PADOY-C-PA06C04	FAILURE OF DIGITAL OUTPUT MODULE PA06C BRANCH 04	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PADOY-D-PA06C02	FAILURE OF DIGITAL OUTPUT MODULE PA06C BRANCH 02	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDOY-A-LX01A02	FAILURE OF DIGITAL OUTPUT MODULE LX01A BRANCH 02	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (23 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDDY-A-LX01A03	FAILURE OF DIGITAL OUTPUT MODULE LX01A BRANCH 03	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDDY-A-LX05A03	FAILURE OF DIGITAL OUTPUT MODULE LX05A BRANCH 03	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.36E-05	PEDDY-C-LX03C01	FAILURE OF DIGITAL OUTPUT MODULE LX03C BRANCH 01	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44N (24 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAB	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B FAIL TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAB	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAC	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1C FAIL TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (25 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAD	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1D FAIL TO OPEN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-C-DGC	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01C	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO START	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44N (26 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	

Table 19.1-44N (27 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AC	2/4 CCF OF EDG 01A/01C FAIL TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AD	2/4 CCF OF EDG 01A/01D FAIL TO RUN	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44N (28 of 28)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-C-DGC	DG 01C FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-C-LOADSQ	LOAD SEQUENCER C FAILS TO OPERATE	
	0.5g	SEIS-CVCS-LINE-FAIL-0.5G	SEISMIC LINE BREAK OF THE CVCS LETDOWN LINE	
	1.00E+00	SEIS-FLAG-NRLOCA	FLAG For Seismically-Induced Non Recoverable LOCA	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	

Table 19.1-44O (1 of 25)

LPSD Level 2 Non-Direct Core Damage POS4B Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44O (2 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44O (3 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44O (4 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44O (5 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	

Table 19.1-44O (6 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44O (7 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABD	3/4 CCF OF EDG 01A/01B/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	

Table 19.1-44O (8 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44O (9 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44O (10 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44O (11 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	

Table 19.1-44O (12 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.58E-05	WOCHWQ3-CH01A/2A/1B	3/4 CCF OF ECW CHILLERS 1A/2A/1B FAIL TO START	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.58E-05	WOCHWQ3-CH01A/2A/1B	3/4 CCF OF ECW CHILLERS 1A/2A/1B FAIL TO START	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44O (13 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44O (14 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	1.00E-01	HR-RS-LPP04B	Operator Fails to Restore SCS during LP POS 4B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44O (15 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	

Table 19.1-44O (16 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.74E-05	DGSQWQ2-LOADSQAB	2/4 CCF OF LOAD SEQUENCER A/B FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.50E-02	DGDGR-C-DGC	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01C	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44O (17 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44O (18 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.15E-05	DGDGZQ2-DG01AB-LOAD	2/4 CCF OF EDG 01A/01B FAIL TO LOAD AND RUN DURING 1ST 1 HOUR	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44O (19 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44O (20 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	

Table 19.1-44O (21 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44O (22 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44O (23 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44O (24 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP04B	Operator Fails to Feed during LP POS 4B	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44O (25 of 25)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	

Table 19.1-44P (1 of 24)

LPSD Level 2 Non-Direct Core Damage POS5 Initiator Cutsets

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44P (2 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44P (3 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44P (4 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	

Table 19.1-44P (5 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	

Table 19.1-44P (6 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44P (7 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABD	3/4 CCF OF EDG 01A/01B/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	

Table 19.1-44P (8 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44P (9 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44P (10 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44P (11 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	

Table 19.1-44P (12 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.58E-05	WOCHWQ3-CH01A/2A/1B	3/4 CCF OF ECW CHILLERS 1A/2A/1B FAIL TO START	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.58E-05	WOCHWQ3-CH01A/2A/1B	3/4 CCF OF ECW CHILLERS 1A/2A/1B FAIL TO START	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44P (13 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44P (14 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	

Table 19.1-44P (15 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	

Table 19.1-44P (16 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.74E-05	DGSQWQ2-LOADSQAB	2/4 CCF OF LOAD SEQUENCER A/B FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.50E-02	DGDGR-C-DGC	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01C	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44P (17 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44P (18 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.15E-05	DGDGZQ2-DG01AB-LOAD	2/4 CCF OF EDG 01A/01B FAIL TO LOAD AND RUN DURING 1ST 1 HOUR	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44P (19 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44P (20 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUENCER A/B/C/D FAIL TO OPERATE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44P (21 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUENCER A/B/C/D FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-351	CCW MOV V351 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44P (22 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	

Table 19.1-44P (23 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	1.00E-01	HR-RS-LPP05	Operator Fails to Restore SCS during LP POS 5	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP05	Operator Fails to Feed during LP POS 5	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	

Table 19.1-44P (24 of 24)

No.	BE. Prob.	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	

Table 19.1-44Q (1 of 29)

LPSD Level 2 Non-Direct Core Damage POS6 Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44Q (2 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44Q (3 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44Q (4 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44Q (5 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	

Table 19.1-44Q (6 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	

Table 19.1-44Q (7 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44Q (8 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABD	3/4 CCF OF EDG 01A/01B/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44Q (9 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1B-PP01B	FAILS TO START CCW PUMP PP01B	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44Q (10 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1B-PP01B	FAIL TO START ESW PUMP PP01B	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1B-PP01B	FAILS TO START OF ECW PUMP 01B	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44Q (11 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1B-072	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1B SXCT SUPPLY HOV SX-072	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44Q (12 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44Q (13 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.58E-05	WOCHWQ3-CH01A/2A/1B	3/4 CCF OF ECW CHILLERS 1A/2A/1B FAIL TO START	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.58E-05	WOCHWQ3-CH01A/2A/1B	3/4 CCF OF ECW CHILLERS 1A/2A/1B FAIL TO START	

Table 19.1-44Q (14 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	

Table 19.1-44Q (15 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44Q (16 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	1.00E-01	HR-RS-LPP06	Operator Fails to Restore SCS during LP POS 6	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	

Table 19.1-44Q (17 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1B-HV13B	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13B	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1B-HV31B	FAILS TO START ECW ROOM CUBICLE COOLER HV31B	

Table 19.1-44Q (18 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1B-CH01B	FAILS TO RUN ECW CHILLER 01B FOR 24 HOURS	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.74E-05	DGSQWQ2-LOADSQAB	2/4 CCF OF LOAD SEQUENCER A/B FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.50E-02	DGDGR-C-DGC	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01C	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44Q (19 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44Q (20 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.15E-05	DGDGZQ2-DG01AB-LOAD	2/4 CCF OF EDG 01A/01B FAIL TO LOAD AND RUN DURING 1ST 1HOUR	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44Q (21 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
	1.30E-02	WOCHS1B-CH01B	FAILS TO START ECW CHILLER CH01B	

Table 19.1-44Q (22 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	

Table 19.1-44Q (23 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44Q (24 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	

Table 19.1-44Q (25 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1B-CT01B	SX CT01B FANS (ANY 1 OF 3) FAIL TO START	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	

Table 19.1-44Q (26 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	

Table 19.1-44Q (27 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP06	Operator Fails to Feed during LP POS 6	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44Q (28 of 28)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	

Table 19.1-44R (1 of 26)

LPSD Level 2 Non-Direct Core Damage POS10 Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP10	Operator Fails to Feed during LP POS 10	
	1.00E-01	HR-RS-LPP10	Operator Fails to Restore SCS during LP POS 10	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44R (2 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP10	Operator Fails to Feed during LP POS 10	
	1.00E-01	HR-RS-LPP10	Operator Fails to Restore SCS during LP POS 10	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (3 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (4 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44R (5 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP10	Operator Fails to Feed during LP POS 10	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAB	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (6 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO START	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44R (7 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (8 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABD	3/4 CCF OF EDG 01A/01B/01D FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44R (9 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABD	3/4 CCF OF EDG 01A/01B/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	

Table 19.1-44R (10 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.36E-03	CCMPS1A-PP01A	FAILS TO START CCW PUMP PP01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	SXMPS1A-PP01A	FAIL TO START ESW PUMP PP01A	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.36E-03	WOMPS1A-PP01A	FAILS TO START OF ECW PUMP 01A	

Table 19.1-44R (11 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP10	Operator Fails to Feed during LP POS 10	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.20E-03	SXHVO-1A-071	LOSS OF SX CT01A DUE TO FAILURE TO OPEN OF 1A SXCT SUPPLY HOV SX-071	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	

Table 19.1-44R (12 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.73E-05	PFHBWQ4-SW2OUAT	4/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C/1D FAIL TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.73E-05	PFHBWQ4-SW2OUAT	4/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C/1D FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.58E-05	WOCHWQ3-CH01A/1B/2B	3/4 CCF OF ECW CHILLERS 1A/1B/2B FAIL TO START	

Table 19.1-44R (13 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.58E-05	WOCHWQ3-CH01A/1B/2B	3/4 CCF OF ECW CHILLERS 1A/1B/2B FAIL TO START	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (14 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (15 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	

Table 19.1-44R (16 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VKHVS1A-HV13A	FAILS TO START CCW PUMP ROOM CUBICLE COOLER HV13A	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VOHVS1A-HV31A	FAILS TO START ECW ROOM CUBICLE COOLER HV31A	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-RS-LPP10	Operator Fails to Restore SCS during LP POS 10	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.00E-03	SIOPU1A-V265	OPERATOR ERROR: SC PUMP PP01A MINI FLOW VV 265 NOT RESTORED AFTER T&M	

Table 19.1-44R (17 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44R (18 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	7.32E-04	WOCHR1A-CH01A	FAILS TO RUN ECW CHILLER CH01A FOR 24 HOURS	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.74E-05	DGSQWQ2-LOADSQAB	2/4 CCF OF LOAD SEUNCER A/B FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP10	Operator Fails to Feed during LP POS 10	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP10	Operator Fails to Feed during LP POS 10	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44R (19 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.65E-05	PFHBWQ3-SW2OUATABD	3/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1D FAIL TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.65E-05	PFHBWQ3-SW2OUATABC	3/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.65E-05	PFHBWQ3-SW2OUATABD	3/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1D FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.50E-02	DGDGR-D-DGD	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01D	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44R (20 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.32E-03	SXCTS-1A-CT01A	SX CT01A FANS (ANY 1 OF 3) FAIL TO START	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	

Table 19.1-44R (21 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (22 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	

Table 19.1-44R (23 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.15E-05	DGDGZQ2-DG01AB-LOAD	2/4 CCF OF EDG 01A/01B FAIL TO LOAD AND RUN DURING 1ST 1HOUR	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44R (24 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	
	1.30E-02	WOCHS1A-CH01A	FAILS TO START ECW CHILLER CH01A	

Table 19.1-44R (25 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	

Table 19.1-44R (26 of 26)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (1 of 29)

LPSD Level 2 Non-Direct Core Damage POS11 Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (2 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (3 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (4 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

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No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAB	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44S (6 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44S (7 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (8 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABD	3/4 CCF OF EDG 01A/01B/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	

Table 19.1-44S (9 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (10 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44S (11 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44S (12 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.73E-05	PFHBWQ4-SW2OUAT	4/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C/1D FAIL TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.73E-05	PFHBWQ4-SW2OUAT	4/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C/1D FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (13 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	

Table 19.1-44S (14 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44S (15 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (16 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	

Table 19.1-44S (17 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.00E-03	SIOPU1A-V265	OPERATOR ERROR: SC PUMP PP01A MINI FLOW VV 265 NOT RESTORED AFTER T&M	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (18 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.74E-05	DGSQWQ2-LOADSQAB	2/4 CCF OF LOAD SEQUENCER A/B FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44S (19 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.65E-05	PFHBWQ3-SW2OUATABC	3/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.65E-05	PFHBWQ3-SW2OUATABD	3/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1D FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44S (20 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	

Table 19.1-44S (21 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44S (22 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.15E-05	DGDGZQ2-DG01AB-LOAD	2/4 CCF OF EDG 01A/01B FAIL TO LOAD AND RUN DURING 1ST 1HOUR	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (23 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44S (24 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (25 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44S (26 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44S (27 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	1.00E-01	HR-RS-LPP11	Operator Fails to Restore SCS during LP POS 11	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44S (28 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP11	Operator Fails to Feed during LP POS 11	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44S (29 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	

Table 19.1-44T (1 of 29)

LPSD Level 2 Non-Direct Core Damage POS12A Initiator Cutsets

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
1	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
2	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
3	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (2 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
4	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
5	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
6	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
7	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (3 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
8	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
9	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
10	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
11	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (4 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
12	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
13	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
14	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44T (5 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
15	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
16	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
17	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.03E-05	PFHBWQ2-SW2OUATAB	2/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
18	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44T (6 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
19	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.95E-05	DGDGKQ4-DG01ABCD	4/4 CCF OF EDG 01A/01B/01C/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
20	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
21	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	
22	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44T (7 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
23	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
24	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
25	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	5.57E-05	SXFLP-S-FT0123AB	CCF OF ALL ESW DERIS FILTERS DUE TO PLUGGING	
26	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	5.55E-05	DGDGKQ2-DG01AB	2/4 CCF OF EDG 01A/01B FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (8 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
27	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
28	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABC	3/4 CCF OF EDG 01A/01B/01C FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
29	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.92E-05	DGDGKQ3-DG01ABD	3/4 CCF OF EDG 01A/01B/01D FAIL TO RUN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
30	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	

Table 19.1-44T (9 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
31	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	3.86E-05	WOCHWQ4-CH01A/2A/1B/2B	4/4 CCF OF ECW CHILLERS 1A/2A/1B/2B FAIL TO START	
32	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
33	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (10 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
34	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
35	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
36	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44T (11 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
37	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
38	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
39	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44T (12 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
40	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.73E-05	PFHBWQ4-SW2OUAT	4/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C/1D FAIL TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
41	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.73E-05	PFHBWQ4-SW2OUAT	4/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C/1D FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
42	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
43	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (13 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
44	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
45	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-A-191	CCW MOV V191 FAILS TO OPEN	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
46	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1A-SCPP01A	FAILS TO START SC PUMP PP01A	
47	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	

Table 19.1-44T (14 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
48	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	
49	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
50	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44T (15 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
51	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
52	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
53	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (16 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
54	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV12A	FAILS TO START EDG ROOM CUBICLE COOLER HV12A	
55	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-A-HV13A	FAILS TO START EDG ROOM CUBICLE COOLER HV13A	
56	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV12B	FAILS TO START EDG ROOM CUBICLE COOLER HV12B	
57	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.29E-04	VDHVS-B-HV13B	FAILS TO START EDG ROOM CUBICLE COOLER HV13B	

Table 19.1-44T (17 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
58	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	8.00E-03	SIOPU1A-V265	OPERATOR ERROR: SC PUMP PP01A MINI FLOW VV 265 NOT RESTORED AFTER T&M	
59	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
60	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (18 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
61	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	
62	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
63	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.74E-05	DGSQWQ2-LOADSQAB	2/4 CCF OF LOAD SEQUENCER A/B FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
64	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44T (19 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
65	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
66	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.65E-05	PFHBWQ3-SW2OUATABC	3/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1C FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
67	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.65E-05	PFHBWQ3-SW2OUATABD	3/4 CCF OF PCB BETWEEN UAT & 4.16KV SW01A/1B/1D FAIL TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
68	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV12B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12B FOR 1HR	

Table 19.1-44T (20 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
69	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1A-SW01A-H2	PCB SW01A-H2 4.16KV SWGR SW01A FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-B-HV13B	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13B FOR 1HR	
70	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
71	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	6.66E-03	PFHBO1B-SW01B-H2	PCB SW01B-H2 4.16KV SWGR SW01B FROM UAT FAILS TO OPEN	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	

Table 19.1-44T (21 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
72	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
73	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
74	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
75	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44T (22 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
76	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.20E-05	PPSO-AP-LC	CCF OF PPS LC APPLICATION SOFTWARE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
77	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.15E-05	DGDGZQ2-DG01AB-LOAD	2/4 CCF OF EDG 01A/01B FAIL TO LOAD AND RUN DURING 1ST 1HOUR	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
78	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
79	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (23 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
80	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
81	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
82	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44T (24 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
83	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
84	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.96E-06	VDHVZO8-HV12/13ABCD	8/8 CCF OF EDG ROOM CUBICLE COOLER HV12A/12B/12C/12D 13A/13B/13C/14D FAIL TO RUN FOR 1HR	
85	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
86	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.89E-06	DGSQWQ4-LOADSQABCD	4/4 CCF OF LOAD SEQUNCER A/B/C/D FAIL TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (25 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
87	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
88	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-352	CCW MOV V352 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
89	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44T (26 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
90	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	9.63E-04	CCMVO-B-192	CCW MOV V192 FAILS TO OPEN	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
91	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-B-DGB	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01B	
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
92	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	2.89E-03	DGDGS-A-DGA	FAILS TO START OF EMERGENCY DIESEL GENERATOR DG01A	
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUENCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	

Table 19.1-44T (27 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
93	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
94	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	1.00E-01	HR-RS-LPP12A	Operator Fails to Restore SCS during LP POS 12A	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	9.47E-04	SIMPS1B-SCPP01B	FAILS TO START SC PUMP 2 PP01B	
95	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-A-DGA	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01A	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	

Table 19.1-44T (28 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
96	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-A-DGA	DG A FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	2.50E-02	DGDGR-B-DGB	FAILS TO RUN EMERGENCY DIESEL GENERATOR DG01B	
	1.00E-01	HR-FB-LPP12A	Operator Fails to Feed during LP POS 12A	
	0.5g	SEIS-CSPP01-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Containment Spray Pump	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
97	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-B-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1A-SCPP01A	FAILS TO RUN SC PUMP PP01A	
98	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.33E-03	DGSQA-A-LOADSQ	LOAD SEQUNCER A FAILS TO OPERATE	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.83E-03	SIMPR1B-SCPP01B	FAILS TO RUN SC PUMP 2 PP01B	

Table 19.1-44T (29 of 29)

No.	BE Prob	Cutsets		Sequence Level HCLPF
		Basic Event	Cutset Description	
99	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV12A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV12A FOR 1HR	
100	1.00E+00	%SEISMIC	DUMMY SEISMIC EVENT	0.5g
	3.78E-03	DGDGL-B-DGB	DG B FAILS TO LOAD AND RUN DURING 1ST 1HR OF OPERATION	
	0.09g	SEIS-LP-LOOP-0.09G	SEISMICALLY-INDUCED LOOP	
	0.5g	SEIS-SIPP02-FAIL-0.5G	SEISMIC INDUCED FAILURE OF THE Safety Injection Pump	
	2.28E-03	VDHVL-A-HV13A	FAILS TO RUN EDG ROOM CUBICLE COOLER HV13A FOR 1HR	

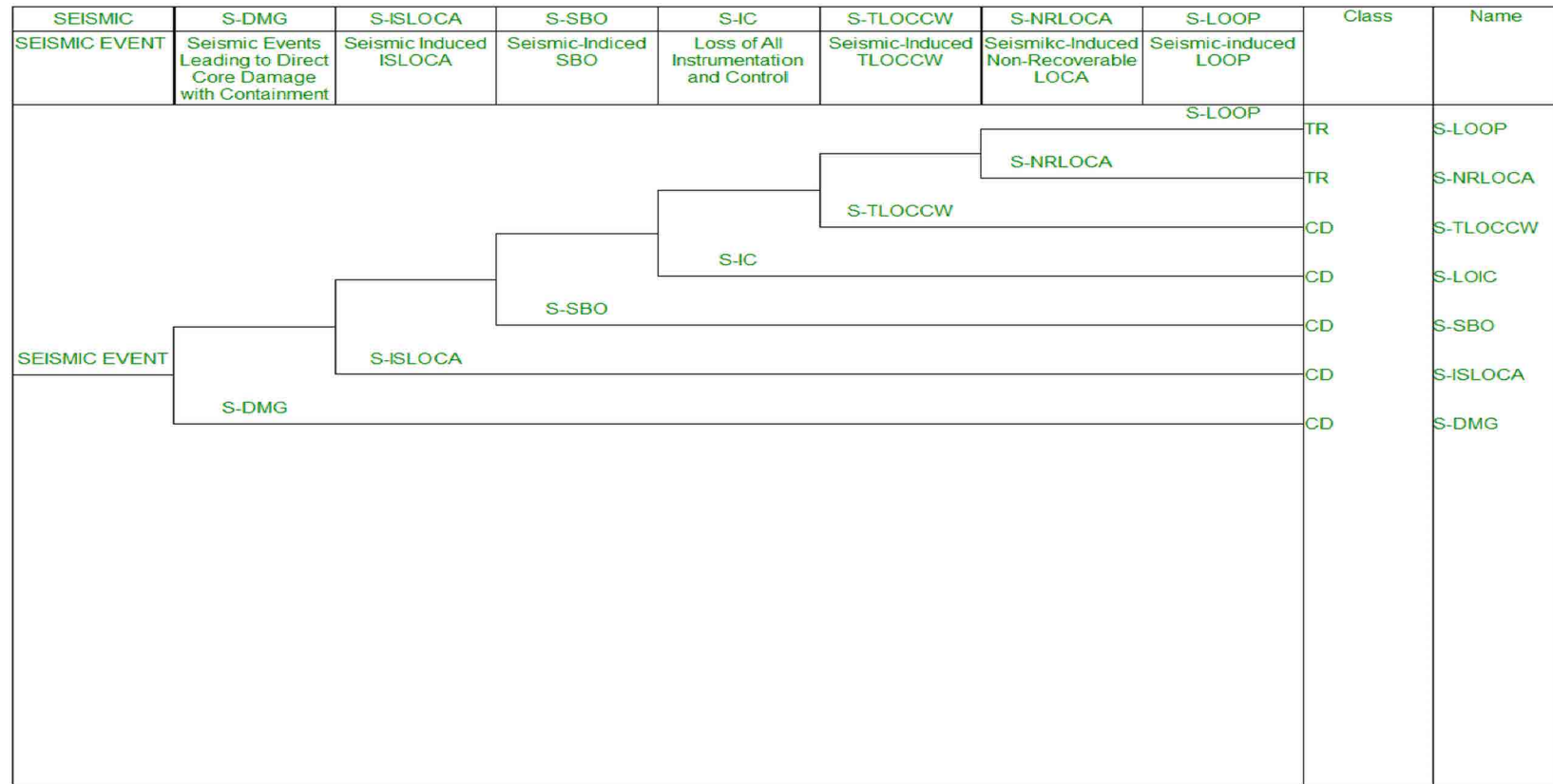


Figure 19.1-209 LPSD Seismic Event Tree

1. LPSD Seismic Event Tree for Core Damage

Seismic event trees for core damage during LPSD period were developed to represent the accident progression and significant equipment failures that can be expected following a seismic event. A series of event trees for POS 3B through 12A was developed to model all significant accident sequences for Core Damage.

1.1 Primary LPSD Seismic Event Tree

Modeling of all accident sequences begins with the LPSD seismic loss of offsite power (S-LOOP) event tree, shown in Figure 1. The seven seismic initiating events are considered in the LPSD seismic event Model for each POS. The five seismic initiating events are assumed to lead to direct core damage, and the two seismic initiating events (Non-Recoverable LOCA, S-LOOP) are considered the mitigation features and operating action to prevent the core damage for each POSs. Therefore, the two event trees for each POS are developed.

Top events shown on the event tree are arranged, from left to right, by decreasing severity. Each top event is described in Table 1.

Table 1 LPSD Seismic Event Tree Top Event

Top Event	Top Event Description	Consequence of Sequence
SEISMIC EVENT	Seismic Event	-
S-DMG	Seismic Events Leading to Direct Core Damage with Containment Structural Damage	Direct to Core Damage
S-ISLOCA	Seismic Induced ISLOCA	Direct to Core Damage
S-SBO	Seismic-Induced SBO	Direct to Core Damage
S-IC	Loss of All Instrumentation and Control	Direct to Core Damage
S-TLOCCW	Seismic Induced TLOCCW	Direct to Core Damage
S-NRLOCA	Seismic-Induced Non-Recoverable LOCA	Transferred to ET "S-NRLOCA"
S- LOOP	Seismic Event Causes LOOP	Transferred to ET "S-LOOP"

1.2 S- LOOP Event Tree

S-LOOP Event tree for POS 3B, 4A and 4B through 12A are Figure 2, 3 and 4. Each top event on the S-LOOP event tree is described in Table 2.

Table 2 S-LOOP Event Tree Top Event

Top Event	Top Event Description	Success Criteria
S-LPP-RS	Restore SCS	Cooling provided by 1 of 2 SCS trains.
S-LPP-SG	Steam Removal using MSADV with AFW	Heat removal from 1 of 2 SGs: 1 of 2 MD-AFW pumps with 1 of 4 MSADVs
S-LPP-LT	LTOP Reclose	2 of 2 LTOP relief valves close
S-LPP03BFB	Feed and Bleed by Safety Injection	Injection with 1 of 4 SI trains Bleed with 1 of 4 POSRVs
S-LPP04AFB		Injection with 1 of 4 SI trains
S-LPP03BFB2		
S-LPP04AFB2		Injection with 1 of 4 SI trains OR 1 of 2 SCS pumps injecting
S-LPP-FB		

1.3 S- NRLOCA Event Tree

S-NRLOCA Event tree for POS 3B through 12A are Figure 5 through 12. Each top event on the S-LOOP event tree is described in Table 3.

Table 3 S-NRLOCA Event Tree Top Event

Top Event	Top Event Description	Success Criteria
S-JLPMK	Makeup of LOCA	Injection with 1 of 4 SI trains
S-JLP-RS	Start Standby SCS	Cooling provided by 1 of 1SCS trains.
HR-IL-JLP03B-01	Isolation of LOCA	N/A
HR-IL-JLP03B-02		N/A
HR-IL-JLP03B-02		N/A
HR-IL-JLP04A-02		N/A
S-JPLSG1	Steam Removal using MSADV with AFW	Heat removal from 1 of 2 SGs: 1 of 2 MD-AFW pumps with 1 of 4 MSADVs
S-JPL03BSG2		
S-JPL04ASG2		
S-JLPLT	LTOP Reclose	2 of 2 LTOP relief valves close
S-JLPFB	Feed and Bleed by Safety Injection	Injection with 1 of 4 SI trains Bleed with 1 of 4 POSRVs
S-JLP04BFB2		Injection with 1 of 4 SI trains
S-JLP05FB2		
S-JLP06FB2		
S-JLP10FB2		
S-JLP11FB2		
S-JLP12AFB2		

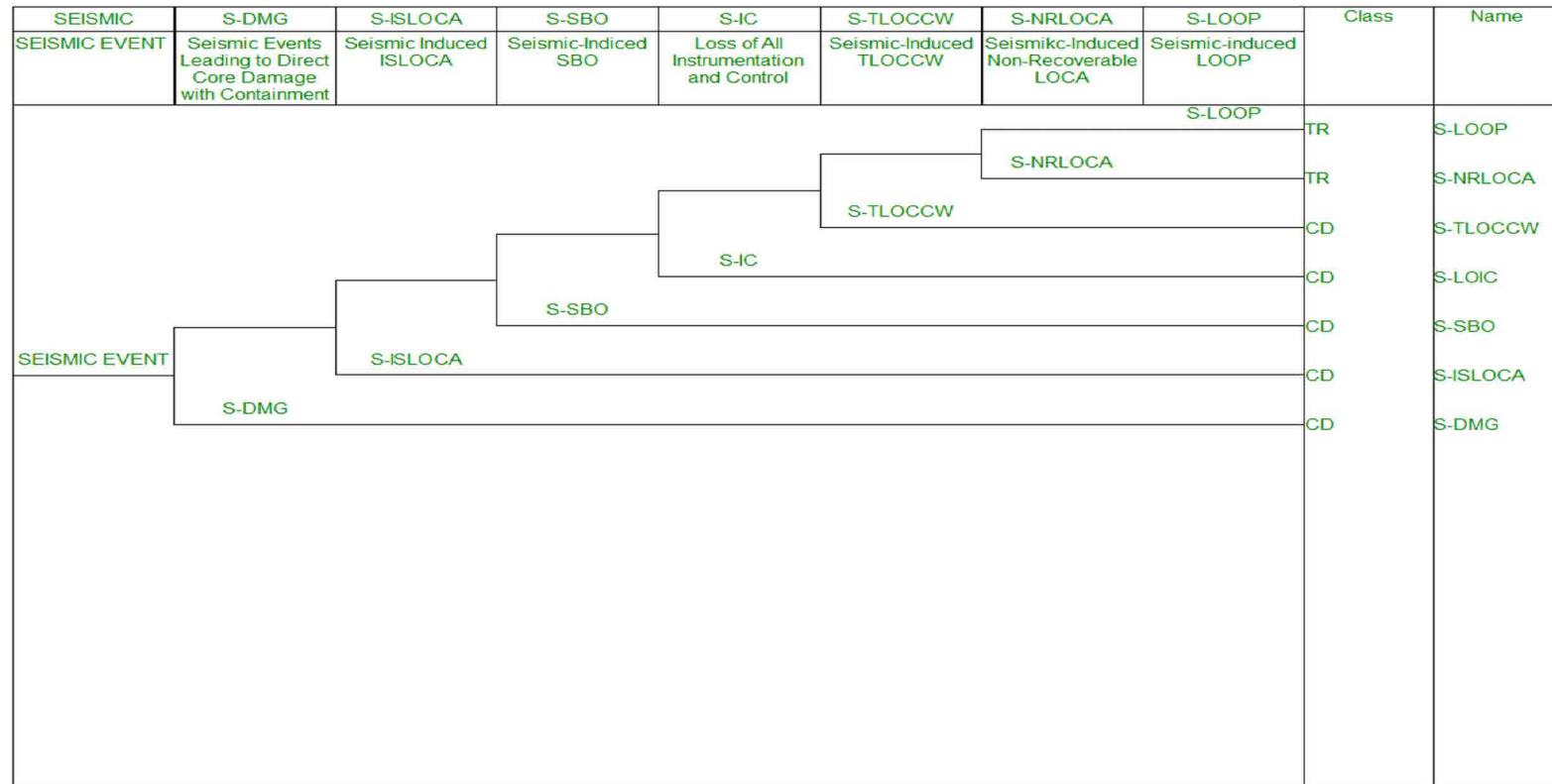


Figure 1 Primary LPSD Seismic Event Tree

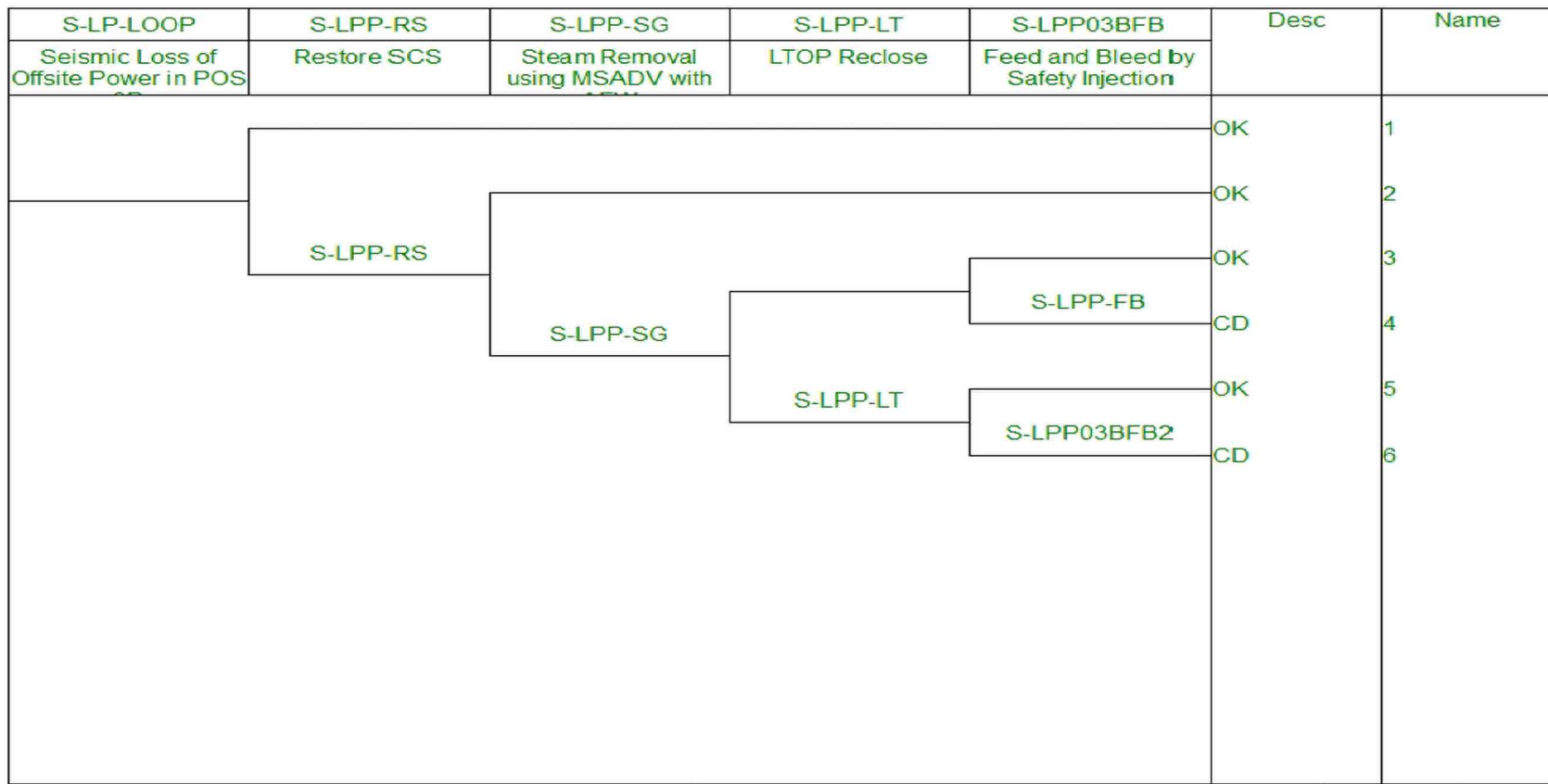


Figure 2 S-LOOP for POS 3B Seismic Event Tree

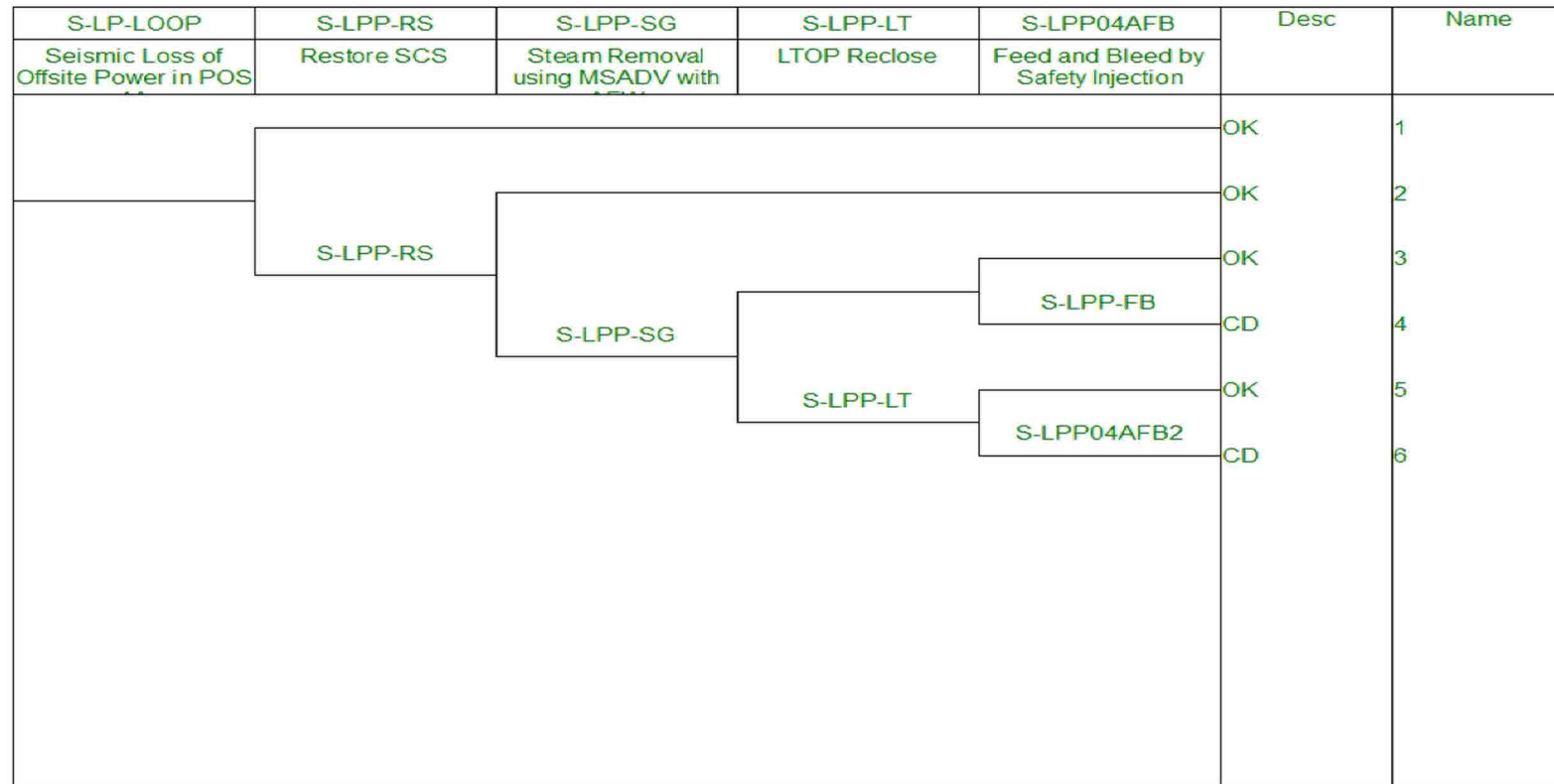


Figure 3 S-LOOP for POS 4A Seismic Event Tree

S-LP-LOOP	S-LPP-RS	S-LPP-FB	Desc	Name
Seismic Loss Offsite Power POS 4B - 12A	Restore SCS	Feed Safety Injection		
			OK	1
	S-LPP-RS		OK	2
		S-LPP-FB	CD	3

Figure 4 S-LOOP for POS 4B through 12A Seismic Event Tree

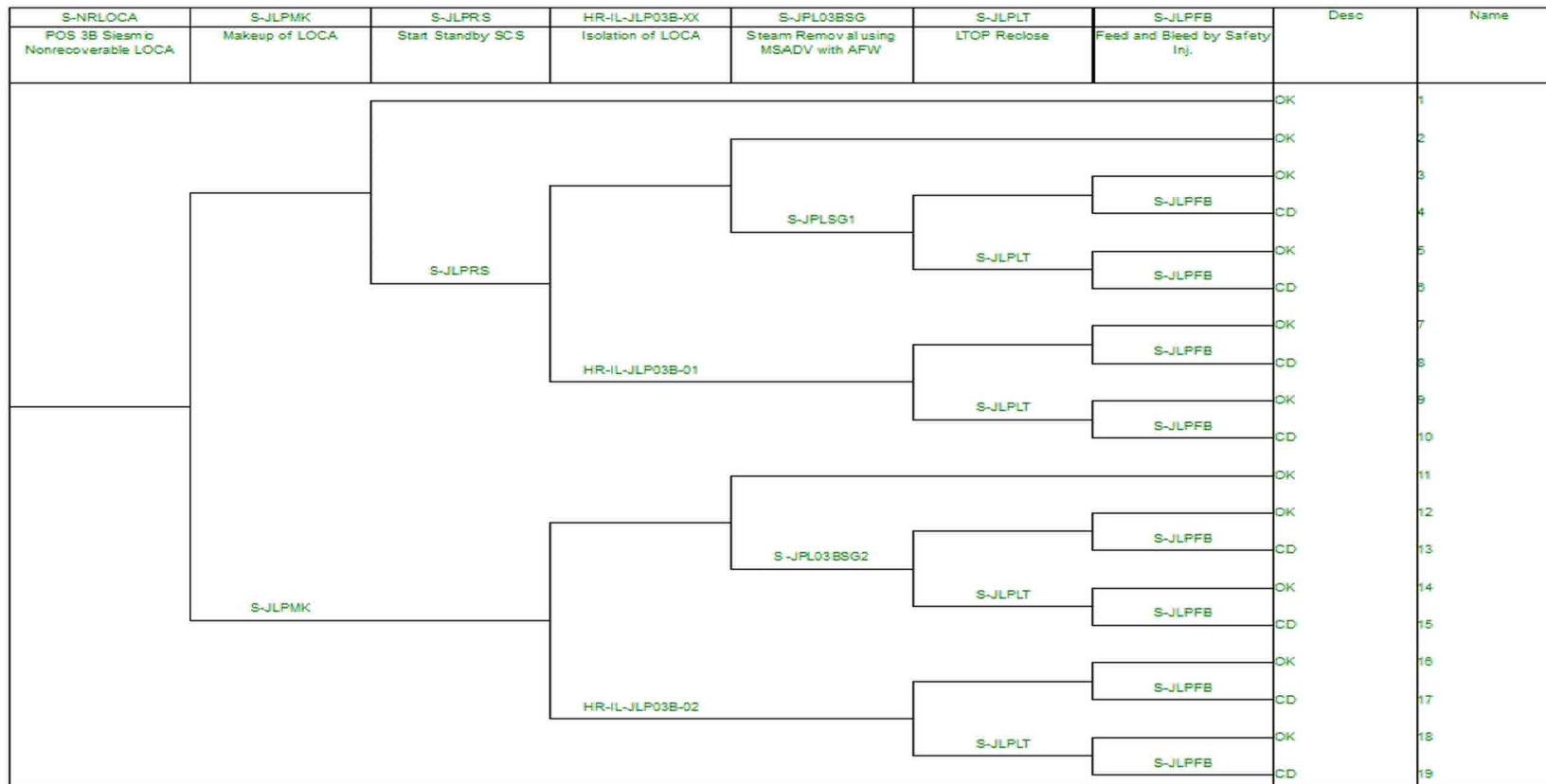


Figure 5 S-NRLOCA for POS 3B Seismic Event Tree

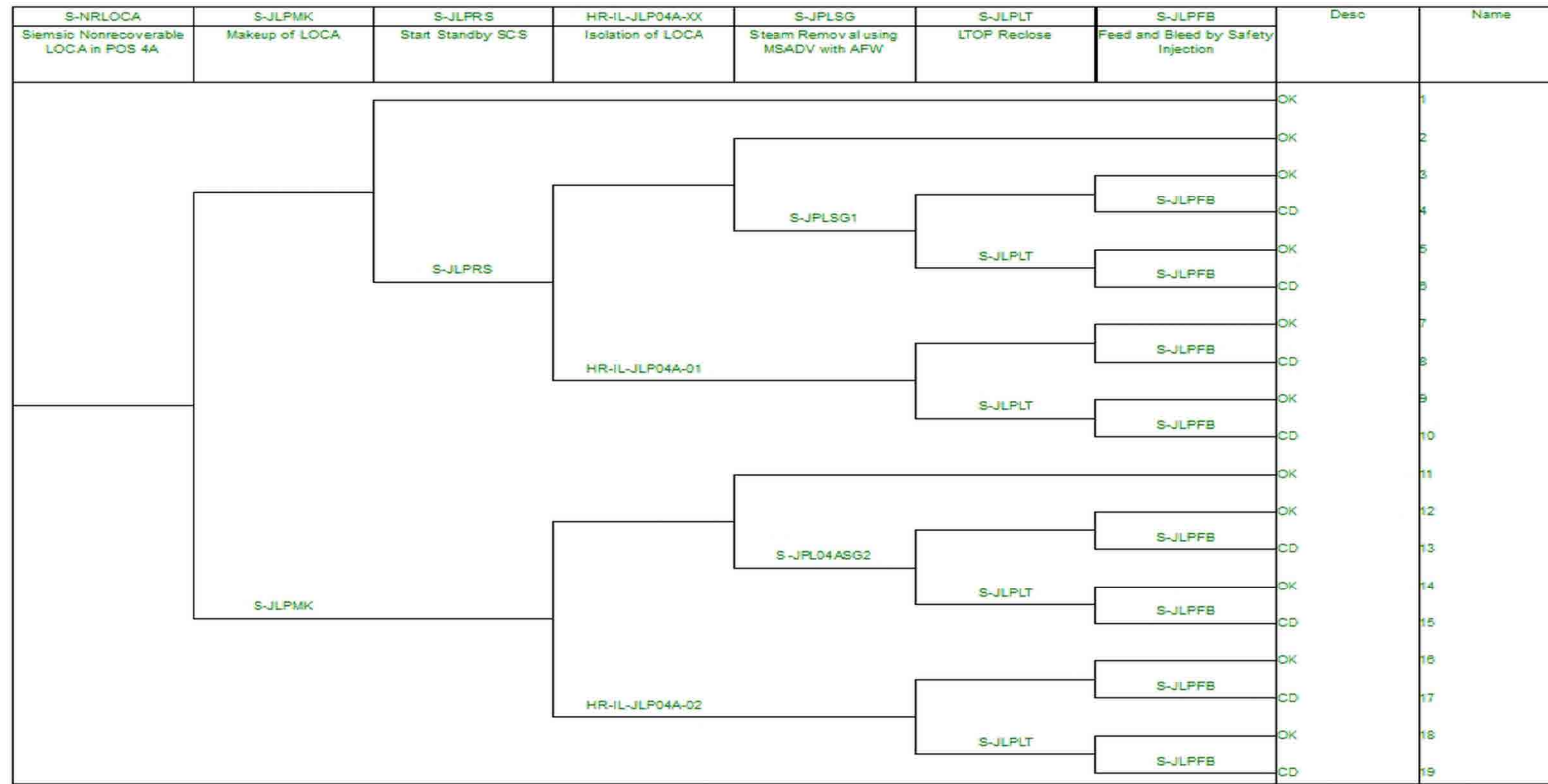


Figure 6 S-NRLOCA for POS 4A Seismic Event Tree

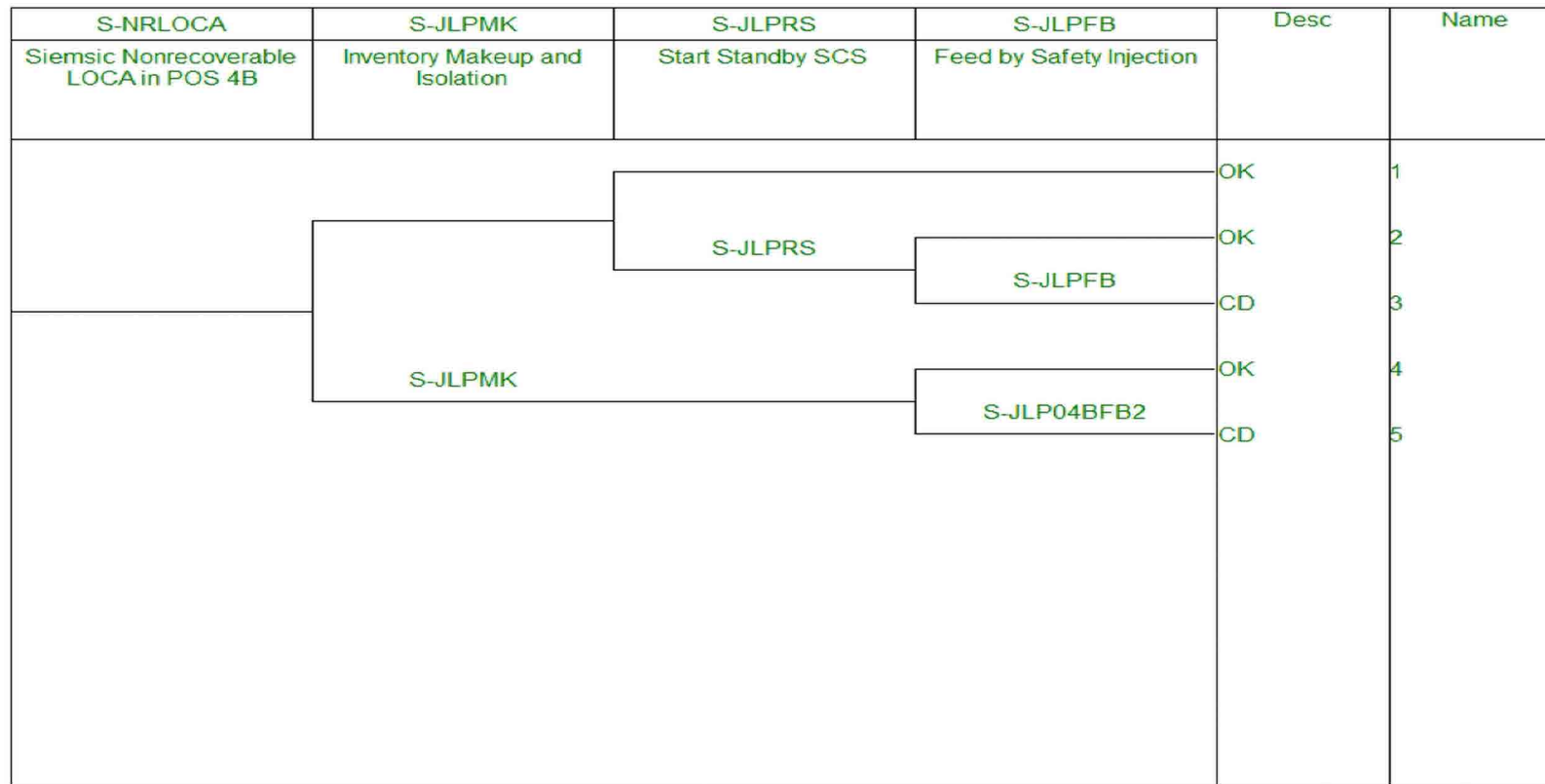


Figure 7 S-NRLOCA for POS 4B Seismic Event Tree

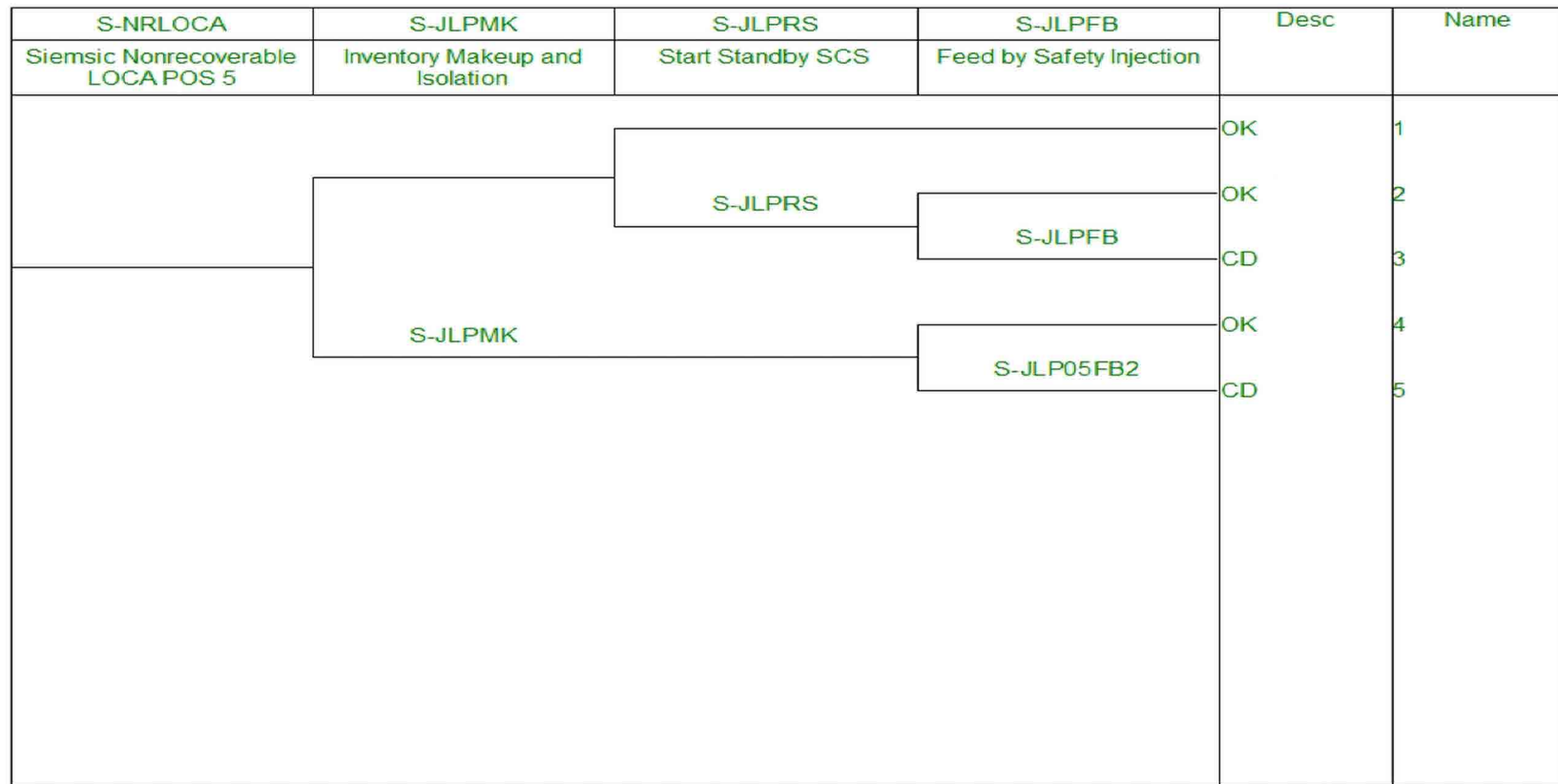


Figure 8 S-NRLOCA for POS 5 Seismic Event Tree

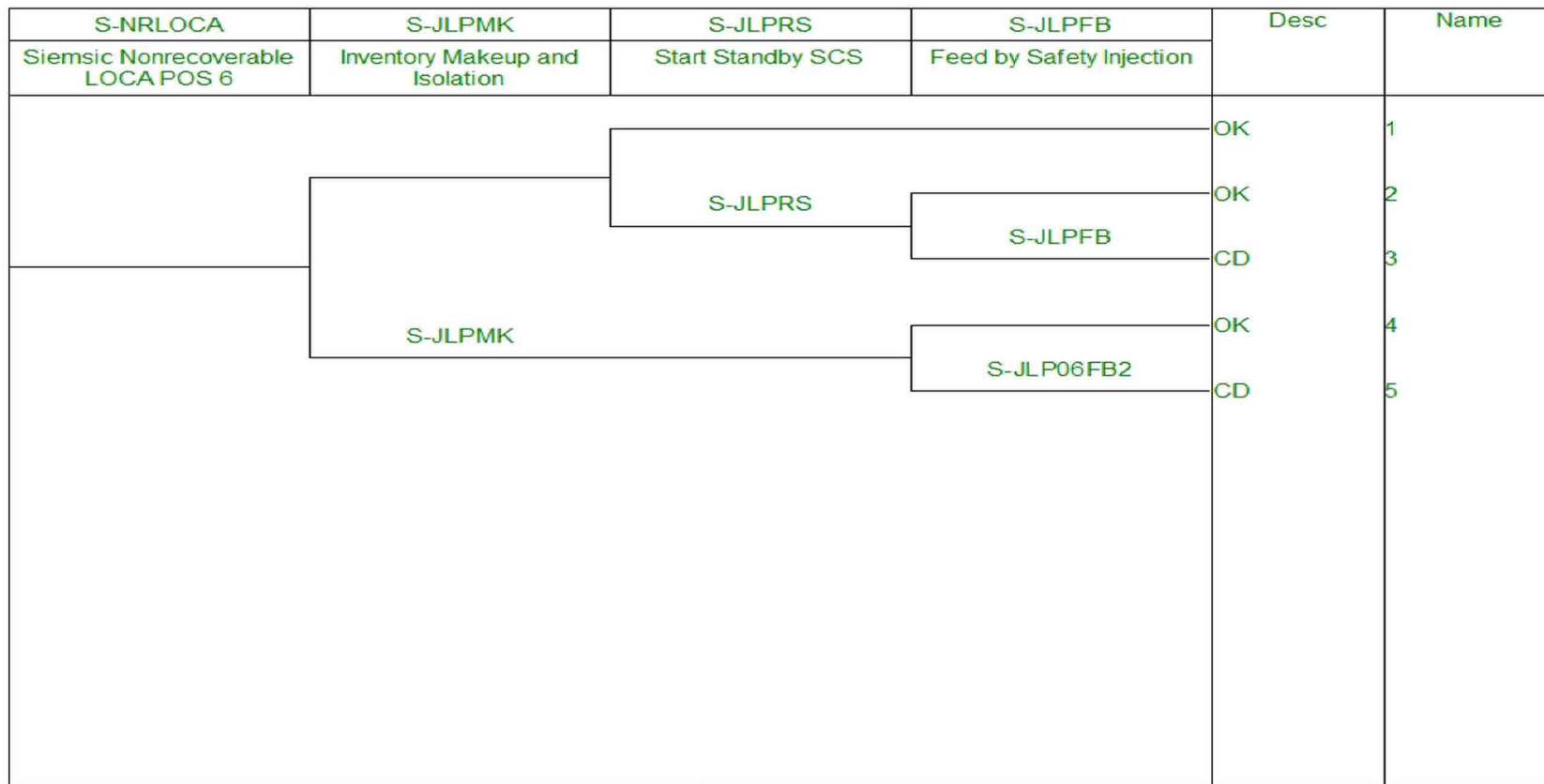


Figure 9 S-NRLOCA for POS 6 Seismic Event Tree

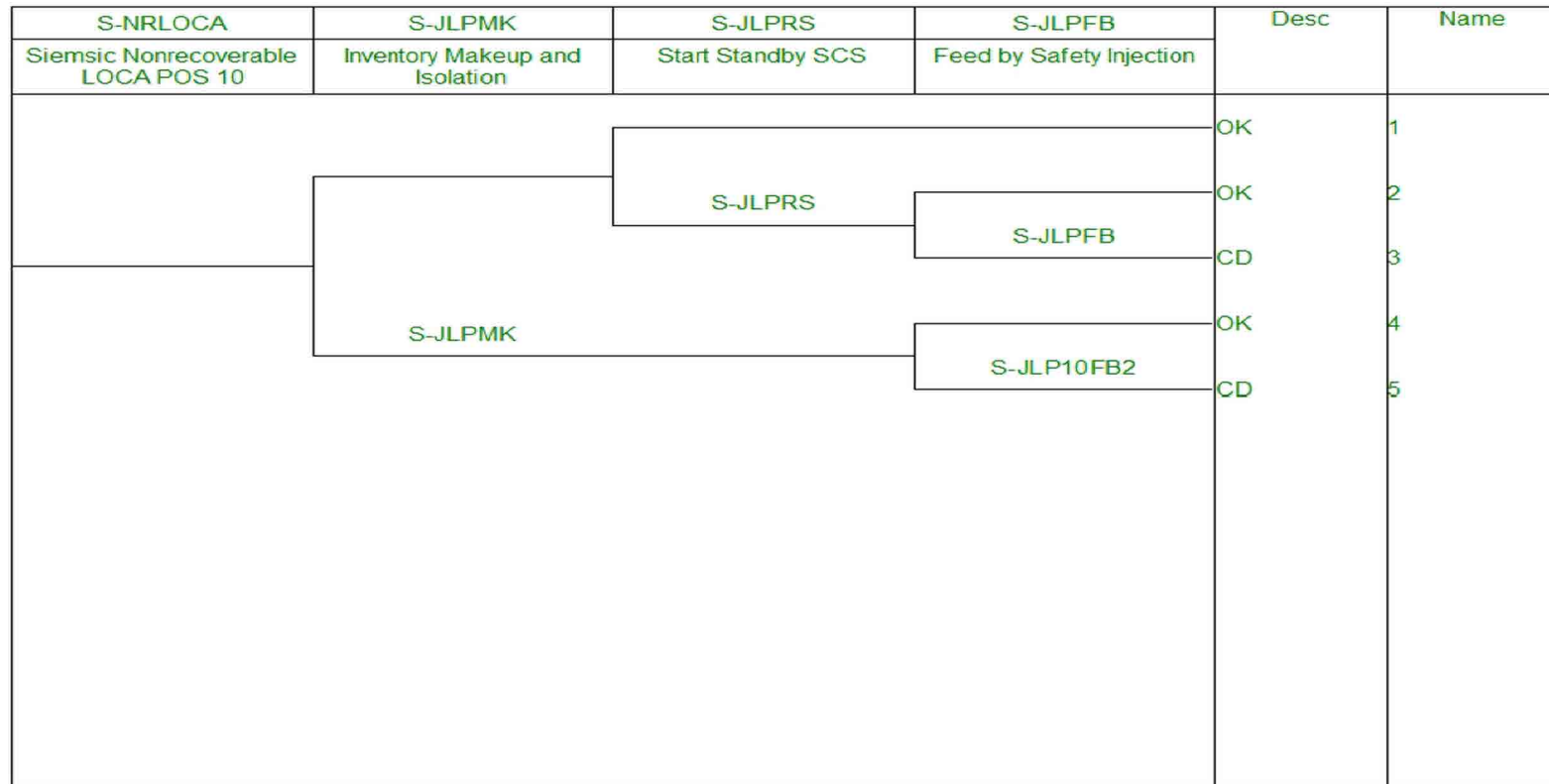


Figure 10 S-NRLOCA for POS 10 Seismic Event Tree

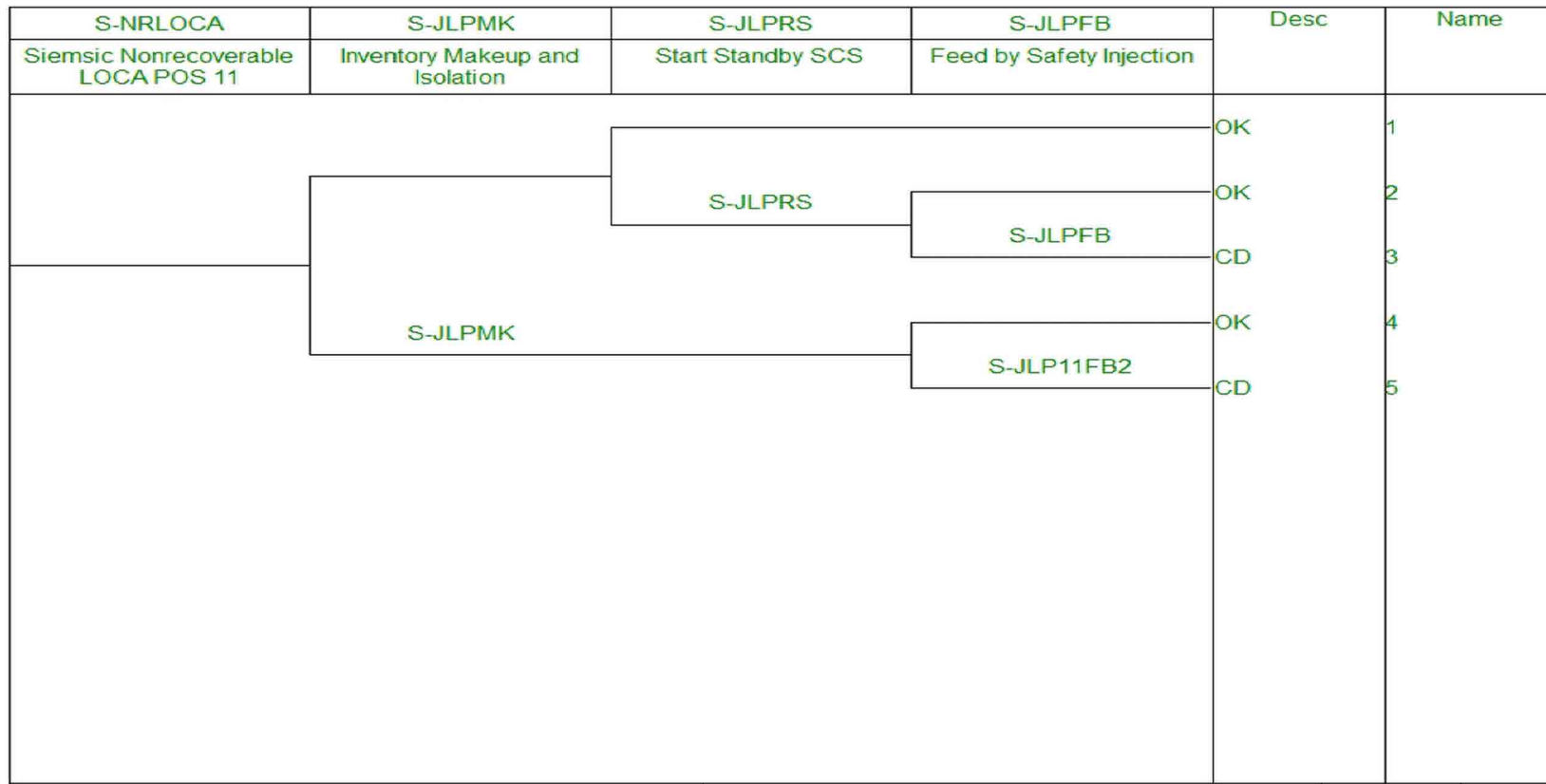


Figure 11 S-NRLOCA for POS 11 Seismic Event Tree

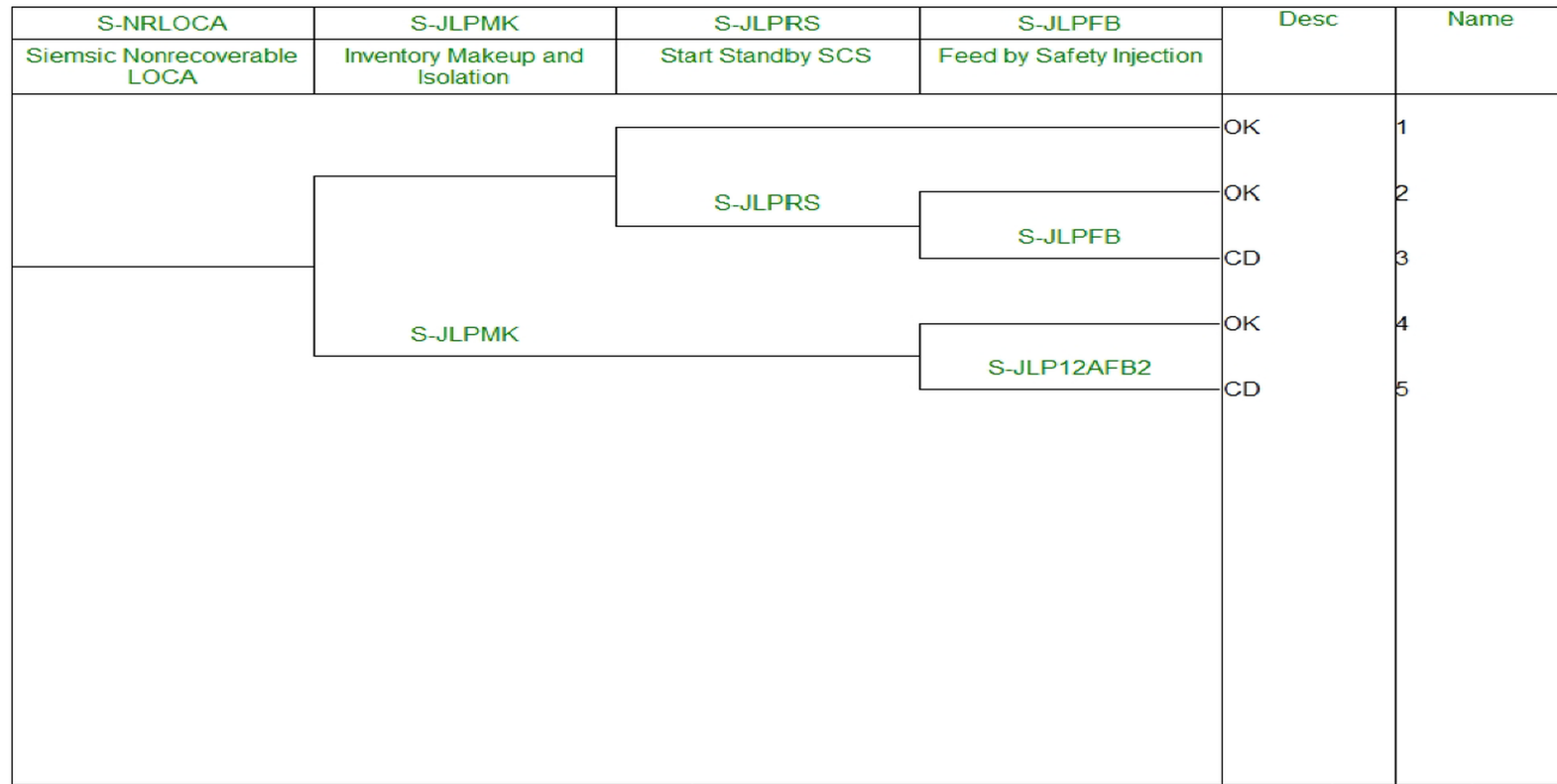


Figure 12 S-NRLOCA for POS 12A Seismic Event Tree

2. LPSD Seismic Event Tree for Containment Failure

Seismic event trees for containment failure during LPSD period were developed to represent the accident progression and significant equipment failures that can be expected following a seismic event. The LPSD seismic accident sequences for containment failure are shown in Table 4. The S-LOOP event for POS 4B through 12A is considered the mitigation feature and operating actions for containment failure and the other initiating events for each POSs lead to direct containment failure or large release. Seismic event trees for containment failure were developed based on the containment event tree (CET) for LPSD Level 2 internal event model. The CET for LPSD Level 2 internal event model is described in the Figure 19.1-209 of the DCD. The information for top event in CET is described in the DCD 19.1.6.2.1.3.

Table 4 LPSD Seismic initiating Event for Containment Failure

Seismic initiating Event	Seismic Initiating Event Description	Consequence of Sequence
S- LOOP	Seismic Event Causes LOOP	POS 3B, 4A : direct to Containment failure
		POS 4B through 12A : Non direct to Containment failure
S-DMG	Seismic Events Leading to Direct Core Damage with Containment Structural Damage	Direct to Containment failure
S-ISLOCA	Seismic Induced ISLOCA	Direct to Containment failure
S-SBO	Seismic-Induced SBO	Direct to Containment Isolation failure
S-IC	Loss of All Instrumentation and Control	Direct to Containment Isolation failure
S-TLOCCW	Seismic Induced TLOCCW	Direct to Containment failure
S-NRLOCA	Seismic-Induced Non-Recoverable LOCA	Direct to Containment failure

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
Reactor Containment building	CTMT	Tan. shear fail near the base	0.94	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	Containment Bldg Structural Failure and Subsequent RCS Structural Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-CTS-EX-FAIL-0.94G
Containment Hatch (Open & Stowed)	CTMT	Generic	[1]	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	RCS Catastrophic Failure is assumed to lead to Containment Structural Failure. Only Applicable for POS-3B, 4A, 13	S-DMG	SIE-FLAG-DMG-CF	SEIS-HATCH-FAIL-0.5G
Reactor Containment Internal	CTMT	Tan. shear fail near the base	1.09	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	Containment Bldg Structural Failure and Subsequent RCS Structural Failure. It is not modeled due to high seismic capacity greater than 0.75g.	S-DMG	SIE-FLAG-DMG-CF	SEIS-CTS-IN-FAIL-1.09G
Auxiliary Building	Auxiliary Building	Shear fail of shear wall at the basemat	0.51	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	Aux bldg is assumed to collapse to containment bldg. Containment Bldg Structural Failure and Subsequent RCS Structural Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-AB-FAIL-0.51G
Emergency Diesel Generator Building	Emergency Diesel Generator Building	Shear fail of shear wall at the basemat	0.87	Modeling is required in the mitigation function FT (Failure of EDG A&B Only)	Modeling is required in the mitigation function FT (Failure of EDG A&B Only)	EDG C&D are installed in the Aux Bldg It is not modeled due to high seismic capacity greater than 0.75g.	N/A	-	SEIS-DG-BLDG-FAIL-0.87G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
Diesel Fuel Oil Tank Building	Diesel Fuel Oil Tank Building	Shear fail of shear wall at the basemat	0.73	Modeling is required in the mitigation function FT (Failure of EDG A&B Only)	Modeling is required in the mitigation function FT (Failure of EDG A&B Only)	EDG C&D are installed in the Aux Bldg It is not modeled due to the relatively low failure impact (loss of 2 EDGs out of 4 EDGs) and higher HCLPF than EDG sub-components which causes EDG unavailable.	N/A	-	SEIS-DG-FOTK-STRUCT-073G
Turbine Building	Turbine Building	Collapse into Aux Bldg	[1]	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	Turbine bldg is assumed to collapse to containment bldg. Impact to Rx Bldg and Subsequent RCS Catastrophic Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-TB-FAIL-0.5G
Compound Building	Compound Building	Collapse into Aux Bldg	[1]	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	Compound Bldg is assumed to collapse to containment bldg. Impact to Rx Bldg and Subsequent RCS Catastrophic Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-CPD-FAIL-0.5G
Reactor Pressure Vessel	CTMT El. 69'~156'	Column support	0.92	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	RCS Catastrophic Failure is assumed to lead to Containment Structural Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-RV-RCS-FAIL-0.92G
Rx Vessel Head (Removed and Stowed)	CTMT	Movement / Collapse	[1]	DIRECT CORE DAMAGE due to RCS Catastrophic Failure	LOSS of CONTAINMENT INTEGRITY is assumed due to	RCS Catastrophic Failure is assumed to lead to Containment	S-DMG	SIE-FLAG-DMG-CF	SEIS-RV-HEAD-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
				i.e. Excessive LOCA	to Containment Structure Failure	Structural Failure. Only Applicable for POS-6, 10			
Reactor Vessel Internal	CTMT El. 69'~156'	Core Sup. Barrel lower flange	0.51	DIRECT CORE DAMAGE due to Loss of Flow through Core	Modeling is required in the mitigation function FT	RCS flow through the core is assumed to be blocked due to the Rx Internal Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-RVI-RCS-0.51G
CEDM (Control Element Drive Mechanism)	CTMT	Binding of control. extension shaft	0.64	N/A	N/A	-	N/A	-	SEIS-CEDM-RCS-FAIL-0.64G
Steam Generator	CTMT El. 114'~136'06"	Anchor fail of snubber lever support asm.	0.6	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	RCS Catastrophic Failure is assumed to lead to Containment Structural Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-SG-RCS-FAIL-0.6G
Steam Generator Nozzle	CTMT El. 114'~136'06"	Economizer nozzle	0.54	Modeling is required in the mitigation function FT (SGs are Unavailable)	Modeling is required in the mitigation function FT (SGs are Unavailable)	During SD Period SDC System is in operation. No Initiator for this failure. This seismic induced failure will be incorporated in the mitigation model	N/A	-	SEIS-SGNOZZ-RCS-FAIL-0.54G
Pressurizer	CTMT El. 114'~156'	Skirt support	0.63	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	RCS Catastrophic Failure is assumed to lead to Containment Structural Failure	S-DMG	SIE-FLAG-DMG-CF	SEIS-PZR-RCS-FAIL-0.63G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
Pressurizer nozzle	CTMT El. 114'~156'	Spray nozzle	0.51	MLOCA Only for POS3A, 3B, 4A, 13	MLOCA Only for POS3A, 3B, 4A, 13	4 inch diameter for PZR spray nozzle For SD MLOCA, exactly the same systems are used for mitigation as for FP MLOCA. Therefore for the SD MLOCA model will not developed.	N/A	N/A	SEIS-PZRNOZZ-RCS-FAIL-0.51G
Reactor Coolant System Piping	CTMT	Surge line nozzle	0.55	LLOCA Only for POS3A, 3B, 4A, 13	LLOCA Only for POS3A, 3B, 4A, 13	4 inch diameter for PZR spray nozzle For SD MLOCA, exactly the same systems are used for mitigation as for FP MLOCA. Therefore for the SD MLOCA model will not developed.	N/A	N/A	SEIS-PIPE-RCS-FAIL-0.55G
Reactor Coolant Pumps	CTMT El. 114'~136'06"	Upper horiz. column support	1.31	DIRECT CORE DAMAGE due to RCS Catastrophic Failure i.e. Excessive LOCA	LOSS of CONTAINMENT INTEGRITY is assumed due to Containment Structure Failure	RCS Catastrophic Failure Causes Containment Structural Failure. Excluded in the Model due to high seismic capacity greater than 0.75g.	S-DMG	SIE-FLAG-DMG-CF	SEIS-RCP-RCS-FAIL-1.31G
ESWIS	ESW Building	Generic	[5]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-ESWIS-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
CCW Hx Building	CCW Hx Building	Generic	[5]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCW-BLDG-FAIL-0.5G
Charging Pumps	AB El. 55'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	Loss of Charging PP	N/A	-	SEIS-CVPP01-FAIL-0.5G
Regenerative Heat Exchanger	CTMT El. 114'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	Loss of Charging Flow	N/A	-	SEIS-CVHX01-FAIL-0.5G
Letdown Heat Exchanger	CTMT El. 100'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	Not Modeled in the Internal event.	N/A	-	N/A
Auxiliary Charging Pump	AB El. 55'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	Loss of Aux Charging PP	N/A	-	SEIS-CVPP03-FAIL-0.5G
CVCS Letdown Line	CTMT	Line Break	[1]	S-NRLOCA Modeling is required in the mitigation function FT	S-NRLOCA Modeling is required in the mitigation function FT	Seismic Induced Failure of Letdown Line Outside Containment.	S-NRLOCA	SIE-FLAG-NRLOCA	SEIS-CVCS-LINE-FAIL-0.5G
Safety Injection Tanks	CTMT. El. 136' 06"	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	SIT Failure will not cause RCS Catastrophic Failure due to the walls surrounding SITs. Several Check VVs should be failed to close to cause LLOCA. It is very low	N/A	N/A	SEIS-SIT-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						probability			
Shutdown Cooling Pumps	AB El. 50'	Generic	[1]	ISLOCA with SC System Failure	ISLOCA with SC System Failure	While SCS is operating, the seismic induced failure of components in the SCS line connected to the RCS outside containment building is assumed to lead to ISLOCA.	S-ISLOCA	SIE-FLAG-ISLOCA	SEIS-SIPP01-FAIL-0.5G
Shutdown Cooling Heat Exchanger	AB El. 50'	Generic	[1]	ISLOCA with SC System Failure	ISLOCA with SC System Failure	While SCS is operating, the seismic induced failure of components in the SCS line connected to the RCS outside containment building is assumed to lead to ISLOCA.	S-ISLOCA	SIE-FLAG-ISLOCA	SEIS-SIHX01-FAIL-0.5G
SC Pump Miniflow Heat Exchanger	AB El. 50'	Generic	[1]	ISLOCA with SC System Failure	ISLOCA with SC System Failure	While SCS is operating, the seismic induced failure of components in the SCS line connected to the RCS outside containment building is assumed to lead to	S-ISLOCA	SIE-FLAG-ISLOCA	SEIS-SIHX02-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						ISLOCA.			
Safety Injection Pump	AB El. 50'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	-	N/A	-	SEIS-SIPP02-FAIL-0.5G
Containment Spray Pump	AB El. 50'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	-	N/A	-	SEIS-CSPP01-FAIL-0.5G
CS Miniflow Hx	AB El. 50'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	-	N/A	-	SEIS-CSHX02-FAIL-0.5G
Containment Spray Heat Exchanger	AB El. 55'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	-	N/A	-	SEIS-CSHX01-FAIL-0.5G
Main Steam Isolation Valves	AB El. 137'06"	Generic	[1]	No Impact	Containment Isolation Failure is assumed due to the steam line break outside containment	No Impact for safety function to prevent core damage. Containment isolation failure is assumed in the aspect of containment failure for Containment performance analysis. Thus this seismic-induced failure should be modeled as part of CIS	N/A	-	SEIS-MSIV-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
Main Steam Atmospheric Valves(ADV)	AB El. 137'06"	Generic	[1]	No Impact	Containment Isolation Failure is assumed due to the steam line break outside containment	No Impact for safety function to prevent core damage. Containment isolation failure is assumed in the aspect of containment failure for Containment performance analysis. Thus this seismic-induced failure should be modeled as part of CIS	N/A	-	SEIS-MSADV-FAIL-0.5G
Main Steam Safety Valves	AB El. 137'06"	Generic	[1]	No Impact	Containment Isolation Failure is assumed due to the steam line break outside containment	No Impact for safety function to prevent core damage. Containment isolation failure is assumed in the aspect of containment failure for Containment performance analysis. Thus this seismic-induced failure should be modeled as part of CIS	N/A	-	SEIS-MSSV-FAIL-0.5G
AFW Pump-Motor Driven	AB El. 78'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	-	N/A	-	SEIS-AFMP-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
AFW Pump-Turbine Driven	AB El. 78'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	-	N/A	-	SEIS-AFTP-FAIL-0.5G
Emergency Diesel Generators	EDG El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DG-FAIL-0.5G
Emergency Diesel Generators (Aux. Building)	AB El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DG-CD-FAIL-0.5G
Emergency Diesel Fuel Oil transfer pump	EDG El. 65'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DOMPS-FAIL-0.5G
Emergency Diesel Fuel Oil transfer pump (Aux. Building)	AB El. 63'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DOMPS-CD-FAIL-0.5G
Starting Air Tank	AB El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DGK40-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
Diesel Fuel Oil Day Tank	EDG El. 121'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DOTK02-FAIL-0.5G
Diesel Fuel Oil Day Tank (Aux. Building)	AB El. 120'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DOTK02-CD-FAIL-0.5G
Diesel Fuel Oil Storage Tank	EDG El. 63'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DOTK01-FAIL-0.5G
Diesel Fuel Oil Storage Tank (Aux. Building)	Aux. El. 65	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DOTK01-CD-FAIL-0.5G
Silencer	AB El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DGSL-FAIL-0.5G
Air Intake Filter	AB El. 109'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure	-	S-SBO	SIE-FLAG-SBO	SEIS-DGFT-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
					caused by loss of all control				
Lube Oil Water Hx	AB El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DGHX-FAIL-0.5G
Motor Driven Fuel Oil Feed Pump	EDG El. 100	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DGPP-FAIL-0.5G
Motor Driven Fuel Oil Feed Pump (Aux. Building)	AB El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DGPP-CD-FAIL-0.5G
Essential Service Water Pump	ESW IS. El. 69'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-SXPP-FAIL-0.5G
CCW Heat Exchangers	CCW Hx Bldg El. 100'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCHX-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						assumed			
CCW Pump	AB El. 55'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCPP-FAIL-0.5G
CCW Surge Tank	AB El. 172'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCTK-FAIL-0.5G
Essential Chilled Water Pumps	AB. El. 78'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-WOPP-FAIL-0.5G
Essential Chillers	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-WOCH-FAIL-0.5G
ECW Compression Tank	AB El. 172'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-WOTK-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						seismic event thus DIRECT CORE DAMAGE is assumed			
ECW Air Separator	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-WOTK02-FAIL-0.5G
Essential Chilled Water System Control Panel	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-WOLP-FAIL-0.5G
AFWP Room Cubicle Cooler-MD	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VOHV33-FAIL-0.5G
CCWP Room Cubicle Cooler	AB El. 55'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VKHV13/14-FAIL-0.5G
SI Room Cubicle Cooler	AB El. 50' AB El. 55'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VKHV11/12-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						seismic event thus DIRECT CORE DAMAGE is assumed			
SC Pump & Mini-flow Hx. Room Cubicle Cooler	AB El. 50' AB El. 55'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VKHV16-FAIL-0.5G
Mech. Pen. Room Cubicle Cooler	AB El. 100' AB El. 120'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCLR-MPR-0.5G
CS Pump Room Cubicle Cooler	AB El. 50' AB El. 55'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VKHV10-FAIL-0.5G
Aux Charging Pump Room Cubicle Cooler	AB El. 55'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCLR-ACVPP-0.5G
Charging Pump Room Cubicle Cooler	AB El. 55'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VKHV18-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						seismic event thus DIRECT CORE DAMAGE is assumed			
Elect. Pen. Room Area Cubicle Cooler	AB El. 120'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCLR-EPA-0.5G
Elect. Pen. Room Area Cubicle Cooler (El. 137')	AB El. 137'6"	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCLR-EPA-137-0.5G
I&C Equipment Room Cubical Cooler	AB El. 157'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Mitigation Modeling is Required	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCLR-IC-0.5G
EDG Room Emergency Cubicle Cooler	EDG El. 100'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Mitigation Modeling is Required	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCLR-EDG-100-0.5G
EDG Room Emergency Cubicle Cooler	EDG El. 135'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Mitigation Modeling is Required	It is highly unlikely of long term operation of SI Pumps under	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-CCLR-EDG-135-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						seismic event thus DIRECT CORE DAMAGE is assumed			
Essential Chiller & Pump Cubicle Cooler	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VOHV32-FAIL-0.5G
CCW Hx. Room Supply Fans	CCW Hx B El. 100' CCW Hx El. 126'	Generic	[1]	No Impact	No Impact	Not Modeled in the Internal event.	N/A		N/A
ESW Pump Room Supply Fan	ESW IS. El. 90'	Generic	[1]	DIRECT CORE DAMAGE TLOCCW	Modeling is required in the mitigation function FT	It is highly unlikely of long term operation of SI Pumps under seismic event thus DIRECT CORE DAMAGE is assumed	S-TLOCCW	SIE-FLAG-TLOCCW	SEIS-VGAH-FAIL-0.5G
EDG Room Emergency Exhaust Fan	EDG El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-VGAH02-FAIL-0.5G
EDG Room Emergency Exhaust Fan (Aux. Building)	AB El. 172'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-VGAH02-CD-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
Control Room Emergency Makeup ACU	AB El. 172'	Generic	[1]	Impact on HEPs Modeled	Impact on HEPs Modeled	It will be reviewed after getting the Mixed Cutsets	N/A	-	N/A
ESF-CCS GC Cabinet	AB El. 156'	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-IC	SIE-FLAG-IC	SEIS-ESF-RPS-FAIL-0.5G
ESF-CCS LC Cabinet	AB El. 156' AB El. 137'6"	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-IC	SIE-FLAG-IC	SEIS-ESF-RPS-FAIL-0.5G
Plant Protection System Cabinet	AB El. 156'	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-IC	SIE-FLAG-IC	SEIS-ESF-RPS-FAIL-0.5G
Reactor Trip Switchgear	AB El. 137'6"	Generic	[1]	No Impact	No Impact	-	N/A	-	N/A
MCR Operator Consoles	AB El. 156'	Generic	[1]	Impact on HEPs Modeled	Impact on HEPs Modeled	It will be reviewed after getting the Mixed Cutsets	N/A	-	SEIS-RPPM01/02/03-FAIL-0.5G
MCR Safety Consoles	AB El. 156'	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-IC	SIE-FLAG-IC	SEIS-RP-PM05-FAIL-0.5G
125V DC Battery Chargers	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due	-	S-IC	SIE-FLAG-IC	SEIS-DC-BC-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
					to the isolation system failure caused by loss of all control				
SI Inverter	AB El. 78'	Generic	[1]	Modeling is required in the mitigation function FT	Modeling is required in the mitigation function FT	-	N/A	-	SEIS-RC-INV-FAIL-0.5G
120V AC Inverter(VBPS S)	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-IC	SIE-FLAG-IC	SEIS-IPINV-FAIL-0.5G
Regulating Transformer	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-IC	SIE-FLAG-IC	SEIS-IPREGTR-FAIL-0.5G
125V DC Control Center	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DC-MCC-FAIL-0.5G
4.16kV MCSG	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-4KV-BUS-FAIL-0.5G
480V Load Center	AB El. 78'	Generic	[1]	DIRECT CORE DAMAGE LOSS of Control	Containment Isolation Failure is assumed due to the isolation	-	S-IC	SIE-FLAG-IC	SEIS-480V-LC-FAIL-0.5G

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
					system failure caused by loss of all control				
480V MCC(Aux. EL.137'06")	AB El. 137'06"	Generic	[1]	LOIC is assumed for all correlated MCC failures	LOIC is assumed for all correlated MCC failures	-	S-IC	SIE-FLAG-IC	SEIS-480V-MCC-FAIL-0.5G
480V MCC(Aux. EL.120')	AB El. 120'	Generic	[1]	LOIC is assumed for all correlated MCC failures	LOIC is assumed for all correlated MCC failures	-	S-IC	SIE-FLAG-IC	SEIS-480V-MCC-FAIL-0.5G
480V MCC(Aux. EL.100')	AB El. 100'	Generic	[1]	LOIC is assumed for all correlated MCC failures	LOIC is assumed for all correlated MCC failures	-	S-IC	SIE-FLAG-IC	SEIS-480V-MCC-FAIL-0.5G
480V MCC(Aux. EL.78')	AB El. 78'	Generic	[1]	LOIC is assumed for all correlated MCC failures	LOIC is assumed for all correlated MCC failures	-	S-IC	SIE-FLAG-IC	SEIS-480V-MCC-FAIL-0.5G
480V MCC(ESW IS EL.100')	ESW IS. El. 90'	Generic	[1]	LOIC is assumed for all correlated MCC failures	LOIC is assumed for all correlated MCC failures	-	S-IC	SIE-FLAG-IC	SEIS-480V-MCC-FAIL-0.5G
Batteries & Racks	AB El. 78' AB El. 100'	Generic	[1]	DIRECT CORE DAMAGE Station Blackout	Containment Isolation Failure is assumed due to the isolation system failure caused by loss of all control	-	S-SBO	SIE-FLAG-SBO	SEIS-DC-BT-FAIL-0.5G
Off-Site Power	various	Generic	0.09[3]	OSP is assumed failed	OSP is assumed failed	-	S-LOOP	SIE-FLAG-LOOP	SEIS-LOOP-0.09g
Reactor Coolant System	various	Generic	0.3[4]	SLCOA Small Leak from RCS is assumed at SSE	SLCOA Small Leak from RCS is assumed at SSE	Applicable Only for POS 3A, 3B, 4A and 13 For SD SLOCA, almost the same systems are used for mitigation as	N/A	SIE-FLAG-SLOCA	SEIS-RCS-LEAK-0.3g

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
						for FP SLOCA. Therefore for the SD SLOCA model will not developed.			
BOP Piping & Supports	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g
HVAC Ducting & Dampers	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g
Cable Trays & Supports	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g
Motor Operated Valves	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g
Air Operated Valves	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g
Electrical Conduit	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g
Relief and Check Valves	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g

Table. LPSD PRA-based SMA FMEA Results

Component	Location	Failure mode	HCLPF (g)	FMEA for CD	FMEA for CF	Remark	IE ID in Seismic ET	IE FLAG in Seismic ET	Basic Event ID
Resistance Temperature Detectors	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g
Pressure Transmitters	various	Generic	> 0.75g[2]	LOIC is assumed S/O due to high seismic ruggedness	LOIC is assumed S/O due to high seismic ruggedness	SSCs Screened out due to high HCLPF	S-IC	SIE-FLAG-IC	SEIS-ALL-SSC-0.75g

Key Assumptions

[1] The component is assigned to COL item (COL 19.1.(8)) and HCLPF value is assumed to be equal to or exceed 1.67 times CSDRS

[2] Inherently Ruggedness Item were assumed as CSDRS x 2.5 = 0.75g

- EPRI-1025287 (Reference 78) COL item (COL 19.1.(8))

[3] HCLPF based on generic value from Risk Assessment of Operational Events Handbook Volume 2 - External Events, R.1.01, January 2008, USNRC (Reference 79).

[4] HCLPF based on Option 2 in "SPRA implementation guide", EPRI 3002000709 (Reference 77)

[5] ESW IS and CCW HX Building are assigned to COL item (COL 19.1(8)) and HCLPF value is assumed to be equal to or exceed 1.67 times GMRS.

APR1400 SMA – ISG-020 Implementation (LPSD)

DC-COL ISG-020 Guidance	Implementation	Met
(1) seismic accident initiation events;	Seismic Accident initiating event are selected based on FMEA in Section 19.1.6.5.4 of the DCD Markup	Yes
(2) a summary of the operating modes, accident sequences and event/fault trees, and damage levels considered in the analysis;	a summary of the operating modes, accident sequences and event/fault trees, and damage levels considered in Section 19.1.6.5.1, 19.1.6.5.2, 19.1.6.5.3, and 19.1.6.5.4 of the DCD Markup	Yes
(3) the definition of the response spectrum shape used for the fragility analysis of SSCs, accident sequences, and the plant;	For the APR1400, the RLE is selected based on the design response spectra of the site-independent SSE which is developed from the certified seismic design response spectra (CSDRS) FMEA in Section 19.1.6.5.1 of the DCD Markup	Yes
(4) identification of the methods used to calculate sequence-level and plant-level HCLPFs for the sequences, operating modes, and damage levels considered;	The methodology of the seismic risk evaluations are described in Section 19.1.6.5.1 f of the DCD Markup	Yes
(5) a table with the capacities (e.g., in terms of the median and logarithmic standard deviation of the fragilities) for the SSCs in the SEL;	It is shown in Table 19.1-43A	Yes
(6) a summary description of the methods used for the derivation of the component fragilities, including a summary of how the component probability of failure is related to the ground motion parameter;	The methodology of the seismic risk evaluations are described in Section 19.1.6.5.1 of the DCD Markup	Yes
(7) for equipment in the SEL which is qualified via tests, a description of the procurement specifications including the enhanced RRS as described in Section 5.1.2 of this ISG to ensure appropriate HCLPF capacity of the procured equipment;	The methodology of the seismic risk evaluations are described in COL 19.1(8) of the DCD Markup	Yes
(8) risk-significant SSCs, dominant cut-sets and sequences, and seismic event/fault trees;	The results of the seismic risk evaluations are described in Section 19.1.6.5.7 and table 19.1-44E~T of the DCD Markup	Yes
(9) sequence-level and plant-level HCLPF capacities for the operating modes and damage levels;	The results of the seismic risk evaluations are described in Section 19.1.6.5.7 and table 19.1-44E~T of the DCD Markup	Yes

APR1400 SMA – ISG-020 Implementation (LPSD)

DC-COL ISG-020 Guidance	Implementation	Met
(10) a summary of independent peer reviews; and,	Given the limited information available at the DC stage for the PRA-based SMA, a peer review will be conducted after a plant specific Seismic PRA by COL holder. ¹⁾	Yes
(11) analysis assumptions, COL action items, interface items, and post licensing activities.	These related items are described in Section 19.1.6.5.2 for analysis assumption and 19.0.1 for COL items of the DCD Rev. 1	Yes

Note 1): In order to review the PRA technical adequacy, a self-assessment was performed for the PRA-based SMA. Any findings and observations from self-assessment are dispositioned to provide reasonable assurance that issues are capture and addressed. Any changes required or affecting PRA model and associated documentation are conducted in a manner consistent with DCD section 19.1.2.4.