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September 26, 1997

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: T. R. QUAY

SUBJECT: DRAFT AP600 PRA ATTACHMENT 54B - SURGE LINE FLOODING EFFECT ON
SHUTDOWN PRA

Dear Mr. Quay:

A telecon was held between the NRC and Westinghouse on September 5, 1997, to discuss the AP600
shutdown PRA. Westinghouse agreed to an NRC-requested action during the telecon to provide four
additional shutdown PRA sensitivity studies and to provide a justification for not requantifying the
PRA given the recent change to the surge line flooding success criteria. A description of the
additional sensitivity studies is provided as Attachment 6 to NRC's September 18, 1997, letter which
summarized the telecon.

Enclosure 1 of this letter is a draft of Attachment 54B which will be placed at the end of AP600 PRA
Chapter 54 in the next revision to the PRA report. Attachment 54B provides the four requested
shutdown PRA sensitivity studies.

Enclosure 2 provides a page change correction to Section 54A.1 of Attachment 54A of the AP600
PRA. The changes presented in Enclosure 2 will be incorporated into the next revision of the PRA
report.

Westinghouse believes Enclosure 1 satisfies the NRC-requested additional sensitivity studies. The
telecon open item is represented by item #5751 in the OITS. Westinghouse will change the
Westinghouse status column to "Action N" for the sensitivity study request, but will keep "Action W"
for the requested justification for not requantifying the PRA to address the change to surge line
flooding success criteria. The justification will be provided by separate letter. The staff is requested
to review the enclosures and to provide Westinghouse with the action to be placed in the NRC status
column of item #5751.
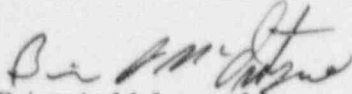
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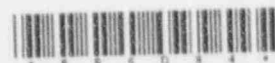
Please contact Cynthia L. Haag on (412) 374-4277 if you have any questions concerning this transmittal.

Brian A. McIntyre, Manager
Advanced Plant Safety and Licensing

jml

Enclosures

cc: J. M. Sebrosky, NRC (Enclosures)
       N. J. Liparulo, Westinghouse (w/o Enclosures)

Enclosure 1 to Westinghouse
Letter DCP/NRC1057

September 26, 1997

ATTACHMENT 54B

SURGE LINE FLOODING EFFECT ON LOW-POWER AND SHUTDOWN RISK ASSESSMENT

54B.1 Effect on Shutdown PRA, Revision 6

An examination of the surge line flooding concerns was conducted on the AP600 design to determine the capability of the IRWST gravity injection function during reduced inventory conditions if normal residual heat removal (RNS) cooling is lost.

The results of that examination indicated that, if RNS cooling is lost during reduced inventory conditions with the reactor coolant system open, a vent path through the ADS 4th stage is required to preclude the occurrence of surge line flooding and thereby not affect gravity injection.

Therefore, to address surge line flooding, Westinghouse has included the requirement for 1-out-of-4 ADS stage 4 valves to be opened, in the success criteria for events during reduced inventory conditions. This success criterion for 1-out-of-4 ADS stage 4 valves to be opened is determined by analyses documented in Section 4.8 of the AP600 Shutdown Evaluation Report, WCAP-14837, (Reference 54B-1). Technical Specification 3.4.14 allows for 2 of the 4 ADS stage 4 valves to be out of service during reduced inventory conditions. This technical specification provision is to allow for unscheduled repairs of as many as two ADS stage 4 valves during drained conditions.

Sensitivity studies are conducted to determine the effect of the additional ADS success criteria for surge line flooding on the shutdown PRA and basic insights obtained from Revision 6 of the shutdown PRA. All shutdown drained cases are affected by the surge line flooding issue. These cases are as follows:

IEV-RCSOD	RCS overdraining when entering mid-loop condition
IEV-LISPED	Loss of offsite power during mid-loop operation
IEV-RNSD	Loss of RNS during mid-loop operation
IEV-CCWD	Loss of CCS/SWS during mid-loop operation
IEV-LOCA24D	LOCA through RNS-V024 during mid-loop operation

The method of evaluating the effect of this success criterion on the shutdown PRA involves the following process:

- Include ADS stage 4 in the shutdown event trees for drained conditions. The revised event trees are provided in Figures 54B-1 through 54B-5.

- Construct two ADS fault trees: ADASD for cases with loss of offsite power available, and ADASDP for the station blackout case. The success criteria summary tables for these fault trees are provided in Tables 54B-1 and 54B-2.

- Evaluate the impact of these changes on the baseline and focused shutdown core damage frequencies.

Note, the shutdown PRA, Revision 6, reflects the conservative modeling of RNS trees in sequences associated with the loss of offsite power (LOSP) initiating event. This conservatism

consists of using an OR gate instead of an AND at the second level of the RNS fault tree files RNP2, RNT2, RNP2D and RNT2D. By correcting of these fault tree files, the baseline core damage frequency changes from 5.5E-08 to 4.7E-08 events per year; the dominant core damage sequences with single RNS train failure from LOSP events are eliminated by these corrections. The corrected RNS fault tree files are used in this evaluation to resolve the surge line issue.

54B.1.1 Baseline PRA Shutdown Core Damage Frequency Sensitivity Results

By incorporating the changes discussed above into the shutdown PRA model, the baseline core damage frequency (CDF) changes from 4.7E-08 to 6.7E-08 events per year; an increase of 43 percent. However, a CDF of 6.7E-08 is still very low.

54B.1.2 Focused PRA Shutdown Core Damage Frequency Sensitivity Results

By incorporating the changes discussed above into the model from the shutdown PRA, Revision 6, the focused PRA sensitivity study core damage frequency changes from 4.1E-07 to 5.1E-07 events per year; an increase of 24 percent. However, a CDF of 5.1E-07 is still very low.

54B.2 Design Change Effect on Surge Line Sensitivity Studies

This section documents the effect of design changes on the baseline and focused PRA results from the surge line sensitivity studies addressed in the previous section (54B.1) of this attachment. The cutset output files for the results in subsections 54B.1.1 and 54B.1.2 form the starting point of these additional sensitivity studies.

These particular design changes, made subsequent to preparing the design reported in the shutdown PRA, Revision 6, are as follows:

1. IRWST injection check valves maintaining the RCS pressure boundary changed to squib valves; (i.e., check valves 123A/B and 125A/B are changed to squib valves 123A/B and 125A/B, respectively)

2. IRWST recirculation paths changed from 10-inch and 4-inch lines to 6-inch lines in all paths

3. IRWST motor-operated valves 118A & B and check valves 120A & B maintaining the IRWST water level changed to squib valves

4. CCS valves to the RNS heat exchanger changed from manual to air-operated

5. The capacity of the service water basin reduced; its duration changed from 24 hours to 12 hours

6. Service water system valves V037A & B changed from air-operated to motor-operated

7. The number of PRHR heat exchangers changed from two to one

8. RNS check valves V015A & B on the DVI lines changed to stop check valves.

This evaluation is an extension of the studies documented in Attachment 54A. The same basic event changes, shown in Attachment 54A, are made in these studies for the base cases. Additional

basic event changes related to the 4th stage ADS components and human error probabilities (HEPs) are made to perform sensitivity studies in addition to those in Attachment 54A.

In these studies, the effect of the design changes are evaluated together by performing the steps in Section 54A.9, but on the surge line-related cutset files. In other words, the sensitivity studies that assess the effect of each design change (as documented in Sections 54A.1 through 54A.8) are not performed in this exercise.

The sensitivity studies for this evaluation, consisting of the following cases, are documented in the subsections that follow:

Case 1 - Effect of design changes on the baseline surge line core damage frequency
Case 2 - Effect of design changes on the focused PRA sensitivity study surge line core damage frequency
Case 3 - Effect on case 1 core damage frequency with single IRWST train and 2 ADS 4th stage valves operation
Case 4 - Effect on case 1 core damage frequency when all HEPs are set to 0.5
Case 5 - Effect on case 3 core damage frequency when all HEPs are set to 0.5.

54B.2.1   Case 1 Sensitivity Study - Effect on Baseline (Surge Line) Results

The Case 1 sensitivity study estimates the effect of the design changes on the baseline shutdown core damage frequency of 6.7E-08, discussed above in subsection 54B.1.1.

This estimation is conducted by making changes to the basic events in the quantification output file from the surge line Level 1 baseline case. The following steps were done:

a) Revise basic event probabilities associated with the new IRWST configuration and unscheduled maintenance unavailability discussed in subsection 54A.1; IWX-MV-GO1 is set to 2.6E-05, IWX-CV-AO set to 3.0E-05, IRWMOD05S set to 3.0E-03, and IRWMOD06S is set to 0.

b) Revise the basic event frequencies for CCS initiating events to reflect the changes discussed in subsection 54A.4; IEV-CCWD is set to 6.02E-04, and IEV-CCWND set to 3.75E-03.

c) Revise the basic event frequencies for the loss of offsite power initiating events to reflect the changes discussed in subsection 54A.5; IEV-LISPED is set to 4.44E-03, and IEV-LOSPND is set to 1.71E-02.

Having modified the basic events to incorporate these design changes into the shutdown PRA, the baseline quantification output file is recalculated to estimate the shutdown core damage frequency. The resulting shutdown core damage frequency changes from 6.7E-08 events per year to 7.0E-08 events per year. The top 200 cutsets from this quantification output file are shown in Table 54B-3. The associated component importance file is shown in Table 54B-4.

54B.2.2   Case 2 Sensitivity Study - Effect on Focused PRA (Surge Line) Results

The Case 2 sensitivity study estimates the effect of the design changes on the focused PRA sensitivity study core damage frequency of 5.1E-07, discussed above in subsection 54B.1.2.

This estimation is conducted by making changes to the basic events in quantification output file from the surge line Level 1 focused PRA case. The following steps were done:

a) Revise basic event probabilities associated with the new IRWST configuration and unscheduled maintenance unavailability discussed in subsection 54A.1; IWX-MV-GO1 is set to 2.6E-05, IWX-CV-AO set to 3.0E-05, IRWMOD05S set to 3.0E-03, and IRWMOD06S set to 0.

b) Revise the basic event frequencies for CCS initiating events to reflect the changes discussed in subsection 54A.4; IEV-CCWD is set to 6.02E-04, and IEV-CCWND set to 3.75E-03.

Note, the service water system basin capacity design change is not included in the focused PRA sensitivity study because this failure does not affect the SWS-related initiating events, and the focused PRA does not credit nonsafety-related systems in the event trees.

Having modified the basic events to incorporate these design changes into the shutdown PRA, the focused PRA quantification output file is recalculated to estimate the shutdown core damage frequency. The resulting shutdown core damage frequency changes from 5.1E-07 events per year to 4.8E-07 events per year. The top 200 cutsets from this quantification output file are shown in Table 54B-5. The associated component importance file is shown in Table 54B-6.

54B.2.3   Case 3 Sensitivity Study - Single IRWST Train & 2 ADS 4th Stage Operation

AP600 Technical Specifications 3.5.8 and 3.4.14 allow one of the IRWST injection trains and two ADS 4th stage valves to be out of service during reduced inventory conditions. These technical specification provisions are to allow for unscheduled repairs of components in any one of the IRWST injection trains and any two ADS 4th stage valves during drained conditions. These provisions are not intended to allow plant personnel to schedule or plan maintenance activities to be conducted during reduced inventory conditions, and, therefore, should not be misconstrued as such.

However, a sensitivity study is performed to estimate the core damage frequency if one train of IRWST and two ADS 4th stage valves are failed at the same time. For this conservative estimate of the design configuration, one IRWST train and two ADS 4th stage valves are assumed to fail during filled and drained shutdown conditions. That is, it is assumed that (a) the IRWST has only one injection line by essentially setting the other train failure probability equal to 1.0; and (b) the ADS 4th stage has only two valves by propagating the common cause failure of two 4th stage valves through the shutdown model.

Note, the ADS 4th stage operation with only 2 valves is reflected in the model by changing only the common cause of the 4 ADS 4th stage squib valves to common cause of 2 ADS 4th stage squib valves. Changes to the squib valves random failure probabilities were not attempted since these changes would not change the result of this sensitivity study.

This sensitivity is performed by modifying basic events in the quantification output file from Case 1, discussed above in subsection 54B.2.1. The following basic events are modified as shown:

ADX-EV-SA = 3.8E-05; IWACV122AO = 1.0; IWACV123AO = 5.8E-04; IWACV124AO = 1.0; IWACV125AO = 5.8E-04; IWBCV122AO = 1.75E-03; IWBCV123AO = 5.8E-04; IWBCV124AO = 1.75E-03; IWBCV125AO = 5.8E-04; IWX-CV-AO = 3.1E-05; IWX-MV-

4

$$GO1 = 3.8E\text{-}05; \quad IRWMOD05S = 0; \quad IRWMOD06S = 0; \quad RNSMOD05S = 1$$

Requantification of the cutset file with these changes provides a core damage frequency of 1.2E-06 events per year. However, a core damage frequency of 1.2E-06 is still quite low. The top 200 cutsets from this quantification output file is shown in Table 54B-7. The associated component importance file is shown in Table 54B-8.

This estimate of the core damage frequency at shutdown is believed to be conservative for the following reasons:

- One train of IRWST is assumed to fail during both drained and non-drained conditions

- Two ADS 4th stage valves are assumed to fail during both drained and non-drained conditions

- The IRWST water is considered to be clean water, suitable for injection into the RCS

- The IRWST is covered to preclude material that could clog the strainer from entering the tank

- The IRWST strainer is assigned a conservative failure probability of 2.4E-04 in the PRA. The plugging of the IRWST strainer is expected to be a much less probable event than reflected in a failure probability of 2.4E-04.

54B.2.4 Case 4 Sensitivity Study - Setting HEPs to 0.5 in Case 1 Cutsets

The Case 4 sensitivity study estimates the effect of the setting the human error probabilities to 0.5 in the quantification output file from Case 1, discussed above in subsection 54B.2.1. The following basic events are set to 0.5:

ADN-MAN01, CCB-MAN01, IWN-MAN01, IWN-MAN01C, LPM-MAN05, REC-MANDAS, REC-MANDASC, RHN-MAN03, RHN-MAN04, RHN-MAN04-SUCC; RHN-MAN05, RHN-MAN05C, PRN-MAN01, SWB-MAN02, and ZON-MAN01.

Requantification of the cutset file with these changes provides a core damage frequency of 2.4E-06 events per year. However, a core damage frequency of 2.4E-06 is still quite low. The top 200 cutsets from this quantification output file is shown in Table 54B-9. The associated component importance file is shown in Table 54B-10.

54B.2.5 Case 5 Sensitivity Study - Setting HEPs to 0.5 in Case 3 Cutsets

The Case 5 sensitivity study estimates the effect of the setting the human error probabilities to 0.5 in the quantification output file from Case 3, discussed above in subsection 54B.2.3. The following basic events are set to 0.5:

ADN-MAN01, CCB-MAN01, IWN-MAN01, IWN-MAN01C, LPM-MAN05, REC-MANDAS, REC-MANDASC, RHN-MAN03, RHN-MAN04, RHN-MAN04-SUCC; RHN-MAN05, RHN-MAN05C, PRN-MAN01, SWB-MAN02, and ZON-MAN01.

Requantification of the cutset file with these changes provides a core damage frequency of 6.2E-

06 events per year. However, a core damage frequency of 6.2E-06 is still quite low. The top 200 cutsets from this quantification output file is shown in Table 54B-11. The associated component importance file is shown in Table 54B-12.

54B.3 Conclusion

The design changes were evaluated to determine their effect on the PRA results and insights from the surge line sensitivity study. The previous subsections provide details on the five quantitative sensitivity studies that basically assess the effects of these design changes on the shutdown (surge line) baseline and focused PRA core damage frequencies. The results of this evaluation are as follows:

a) When the design changes are incorporated together, the baseline (surge line) shutdown PRA core damage frequency changes from 6.7E-08 to 7.0E-08 events per year; an increase of only 4 percent.

b) When the design changes are incorporated together, the focused (surge line) shutdown PRA core damage frequency changes from 5.1E-07 to 4.8E-07 events per year; a decrease of 6 percent.

c) Although some top cutsets are reordered, the top 50 to 100 cutsets are more or less the same. This can be seen when the cutsets for the baseline and focused shutdown studies in Section 54B.1 are compared with the results from Cases 1 and 2 in Section 54B.2.

d) Although basic events importance are changed and reordered in some cases, the most important events are relatively the same, as shown by their "importance % decrease" values in the related component importance tables.

e) When the HEPs are set to 0.5 in the surge line baseline case, the core damage frequency becomes 2.4E-06 events per year, which is about 34 times greater than the base case core damage frequency of 7.0E-08 events per year. This increase in the base case core damage frequency is somewhat significant even though a core damage frequency of 2.4E-06 is still quite low. The result indicates that the operator actions are important in maintaining a very low core damage frequency for internal events at shutdown.

f) Although the functions of the IRWST and the RNS and its support systems (CCS and SWS) are still important to maintaining plant safety during shutdown, the function of ADS becomes more important than reflected in Revision 6 of the PRA, since the ADS 4th stage is now required to preclude the effects of surge line flooding and thereby maintain plant safety. The importance of these functions are due mainly because of their required operability during reduced inventory conditions, where initiating events dominate the plant shutdown risk.

54B.4 References

54B-1   "AP600 Shutdown Evaluation Report," WCAP-14837, Revision 0, March 1997.

Table 54B-1

FAULT TREE "ADASD"
SUCCESS CRITERIA SUMMARY

Event description:	Automatic depressurization system, automatically actuated, fails to provide RCS vent path following a loss of the residual heat removal capability during reduced inventory shutdown conditions with the vessel head intact. For this scenario, offsite power is available
Success configuration:	1 out of 4 lines of stage 4
System initial status:	All squib valves of stage 4 closed
Mission time:	24 hours
Components required to change status:	Squib valve of stage 4 is required to open
Initiating signals:	PMS: automatic actuation on low hot leg water level signal
Operator actions:	Manual actuation from the main control room when automatic actuation fails - basic events: LPM-MAN05 and ADN-MAN01 performed through PMS - basic event: REC-MANDAS performed through DAS

Table 54B-2

FAULT TREE "ADASDP"
SUCCESS CRITERIA SUMMARY

Event description:	Automatic depressurization system, automatically actuated, fails to provide RCS vent path following a loss of the residual heat removal capability during reduced inventory shutdown conditions with the vessel head intact. For this scenario, station blackout has occurred
Success configuration:	1 out of 4 lines of stage 4
System initial status:	All squib valves of stage 4 closed
Mission time:	24 hours
Components required to change status:	Squib valve of stage 4 is required to open
Initiating signals:	PMS: automatic actuation on low hot leg water level signal
Operator actions:	Manual actuation from the main control room when automatic actuation fails - basic events: LPM-MAN05 and ADN-MAN01 performed through PMS - basic event: REC-MANDAS performed through DAS

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

Reduced Sum of Cutsets: 7.0490E-08

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
1	1.81E-08	25.68	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.00E-05	ADX-EV-SA
2	1.57E-08	22.27	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023				2.60E-05	IWX-MV-GO1
3	7.22E-09	10.24	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
4	3.09E-09	4.38	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
5	2.45E-09	3.48	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.00E-05	ADX-EV-SA
6	2.24E-09	3.18	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
7	2.19E-09	3.11	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
8	2.12E-09	3.01	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023				2.60E-05	IWX-MV-GO1
9	1.83E-09	2.60	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT			4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			IWN-MAN00C				5.00E-02	IWN-MAN00C
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
10	1.58E-09	2.24	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			CCF OF PRESSURE TRANSMITTERS				2.63E-06	CCX-XMTRX
11	9.78E-10	1.39	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
12	7.24E-10	1.03	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT			4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
13	7.22E-10	1.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
14	5.04E-10	.71	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS	WITH RCS FILLED		1.68E-05	IEV-LOCA24ND
			CCF OF GRAVITY	INJECTION CHECK VALVES TO OPEN			3.00E-05	IWX-CV-AO
15	4.33E-10	.61	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			MECHANICAL	FAILURE CAUSES	MOV 121A TO	FAIL-TO-OPEN	3.00E-03	IRWMOD05S
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
16	3.75E-10	.53	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS
			CCF OF THE POWER INTERFACE OUTPUT BOARDS IN PMS				8.62E-06	CCX-EP-SAM
17	3.59E-10	.51	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	6.83E-04	LPM-MAN05
18	3.39E-10	.48	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.90E-05	ADX-EV-SA
19	3.23E-10	.46	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF THE POWER INTERFACE OUTPUT BOARDS IN PMS				8.62E-06	CCX-EP-SAM
20	2.96E-10	.42	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
21	2.94E-10	.42	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023				2.60E-05	IWX-MV-GO1
22	2.60E-10	.37	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	6.83E-04	LPM-MAN05
23	2.14E-10	.30	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
24	2.02E-10	.29	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
25	1.81E-10	.26	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS FILLED	1.71E-02	IEV-LOSPND
			OFFSITE	AC POWER	RECOVERED IN	2 HOURS	7.60E-01	SUC-R2S
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS
26	1.75E-10	.25	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	ZOX-PD-ES
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
27	1.56E-10	.22	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS FILLED	1.71E-02	IEV-LOSPND
			OFFSITE	AC POWER	RECOVERED IN	2 HOURS	7.60E-01	SUC-R2S
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
28	1.36E-10	.19	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
29	1.33E-10	.19	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT LOGIC GROUPS			1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	6.83E-04	LPM-MAN05

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME	EVENT PROB	IDENTIFIER
30	1.26E-10	.18	OVERDRAINING OF RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC	9.45E-01	RHN-MAN04-SUCC
			DUE TO CCF OF THE SQUIB VALVES TO OPERATE	3.00E-05	ADX-EV-SA
31	1.23E-10	.17	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			BATTERY DB1 UNAVAILABLE	2.20E-03	ED1MOD03
			DUE TO CCF OF THE SQUIB VALVES TO OPERATE	3.00E-05	ADX-EV-SA
32	1.17E-10	.17	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			FAILURE OF PLS OUTPUT LOGIC I/Os	2.09E-03	PLSMOD11
			DUE TO CCF OF THE SQUIB VALVES TO OPERATE	3.00E-05	ADX-EV-SA
33	1.12E-10	.16	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			CCF TO START OF ENGINE-DRIVEN FUEL PUMPS	2.00E-03	ZOX-PD-ES
			DUE TO CCF OF THE SQUIB VALVES TO OPERATE	3.00E-05	ADX-EV-SA
34	1.09E-10	.15	OVERDRAINING OF RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC	9.45E-01	RHN-MAN04-SUCC
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023	2.60E-05	IWX-MV-GO1
35	1.07E-10	.15	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			BATTERY DB1 UNAVAILABLE	2.20E-03	ED1MOD03
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023	2.60E-05	IWX-MV-GO1
36	1.05E-10	.15	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			COMMON CAUSE FAILURE 4KV BREAKERS TO OPEN	1.20E-03	ECX-CB-GO
			COMMON CAUSE FAILURE OF THE BATTERIES IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
37	1.01E-10	.14	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			FAILURE OF PLS OUTPUT LOGIC I/Os	2.09E-03	PLSMOD11
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023	2.60E-05	IWX-MV-GO1
38	9.78E-11	.14	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	8.15E-05	IEV-RNSD
			SOFTWARE CCF OF ALL CARDS	1.20E-06	CCX-SFTW
39	9.70E-11	.14	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			CCF TO START OF ENGINE-DRIVEN FUEL PUMPS	2.00E-03	ZOX-PD-ES
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023	2.60E-05	IWX-MV-GO1
40	9.61E-11	.14	LOSS OF RNS WITH RCS FILLED INITIATING EVENT OCCURS	9.61E-04	IEV-RNSND
			FAILURE OF MANUAL DAS ACTUATION	1.16E-02	REC-MANDAS
			CCF OF THE POWER INTERFACE OUTPUT BOARDS IN PMS	8.62E-06	CCX-EP-SAM
41	9.20E-11	.13	LOSS OF RNS WITH RCS FILLED INITIATING EVENT OCCURS	9.61E-04	IEV-RNSND
			COND. PROB. OF REC-MANDAS (FAILURE OF MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			CCF OF ORIFICES	2.77E-04	CCX-ORY-SP
			OPERATOR FAILS TO RECOGNIZE THE NEED FOR RCS DEPRESSURIZATION	6.83E-04	LPM-MAN05
42	8.28E-11	.12	LOSS OF RNS WITH RCS FILLED INITIATING EVENT OCCURS	9.61E-04	IEV-RNSND
			FAILURE OF MANUAL DAS REACTOR TRIP HARDWARE	1.00E-02	MDAS
			CCF OF THE POWER INTERFACE OUTPUT BOARDS IN PMS	8.62E-06	CCX-EP-SAM

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
43	6.71E-11	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
44	6.68E-11	.09	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	6.83E-04	LPM-MAN05
45	6.49E-11	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PLS0301ASA
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
46	6.49E-11	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PLS0301BSA
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
47	6.40E-11	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
48	6.16E-11	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMODIX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
49	6.02E-11	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
50	5.95E-11	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
51	5.87E-11	.08	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			MECHANICAL	FAILURE CAUSES	MOV 121A TO	FAIL-TO-OPEN	3.00E-03	IRWMOD05J
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
52	5.82E-11	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	SCX-CB-GO
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1
53	5.71E-11	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS FILLED	1.71E-02	IEV-LOSPND
			FAILURE TO	RECOVER AC POWER	IN 2 HOURS		2.40E-01	OTH-R2
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS
54	5.62E-11	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PLS0301BSA
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
55	5.62E-11	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PL5G301ASA
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-G01
56	5.22E-11	.07	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS
57	5.19E-11	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
58	5.16E-11	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-G01
59	5.03E-11	.07	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
60	4.93E-11	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
61	4.92E-11	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS FILLED	1.71E-02	IEV-LOSPND
			FAILURE TO	RECOVER AC POWER	IN 2 HOURS		2.40E-01	OTH-R2
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
62	4.71E-11	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CCF TO OPEN	OF THE STOP	CHECK VALVES		6.10E-04	RNX-KV-GO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
63	4.68E-11	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PL5MOD11
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
64	4.50E-11	.06	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
65	4.48E-11	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
66	4.46E-11	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05
67	4.33E-11	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	1DBBSDD1TM

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB.	IDENTIFIER
68	4.33E-11	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDBBSDK1TM
69	4.33E-11	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDBBSDS1TM
70	4.31E-11	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
71	4.10E-11	.06	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
72	4.08E-11	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CCF TO OPEN	OF THE STOP	CHECK VALVES		6.10E-04	RNX-KV-GO
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
73	4.08E-11	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
74	3.99E-11	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
75	3.86E-11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
76	3... 11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
77	3.58E-11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
78	3.54E-11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
79	3.54E-11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
80	3.47E-11	.05	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			IRWST DISCHARGE	LINE "A"	STRAINER	PLUGGED	2.40E-04	IWA-PLUG
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
81	3.42E-11	.05	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	6.83E-04	LPM-MAN05
82	3.41E-11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO OPEN	OF THE STOP	CHECK VALVES		6.10E-04	RNX-KV-GO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
83	3.36E-11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	- WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PLSMOD11
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
84	3.21E-11	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
85	2.97E-11	.04	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
86	2.96E-11	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO OPEN	OF THE STOP	CHECK VALVES		6.10E-04	RNX-KV-GO
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-G01
87	2.89E-11	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05
88	2.82E-11	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED COMPONENT	FAILURES			5.04E-04	ED1MOD01
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
89	2.76E-11	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD02
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
90	2.70E-11	.04	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			IWN-MAN00C				5.00E-02	IWN-MAN00C
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
92	2.69E-11	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
93	2.60E-11	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PLS0301BSA
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
94	2.60E-11	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PLS0301ASA
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
95	2.49E-11	.04	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRMD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
96	2.46E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
97	2.45E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
98	2.44E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED COMPONENT	FAILURES			5.04E-04	ED1MOD01
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-G01
99	2.39E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-G01
100	2.38E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
101	2.28E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
102	2.18E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
103	2.18E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB2C0VO
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
104	2.13E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1
105	1.98E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	Z02MOD01
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1
106	1.93E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
107	1.90E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
108	1.89E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CCF TO OPEN	OF THE STOP	CHECK VALVES		6.10E-04	RNX-KV-GO
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
109	1.86E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PL50301ASA
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
110	1.86E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PL50301BSA
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
111	1.84E-11	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF LOGIC	GROUP PROCESSING			1.38E-05	CCX-PMA030X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
112	1.81E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			PUMP 01A FAILS:	STOP CK V007A,	CB & RELAY FTC:	CB ECS122 SPO	1.53E-02	RNAMOD06S
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
113	1.77E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
114	1.77E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD13
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
115	1.77E-11	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
116	1.73E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
117	1.73E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01A FAILS;	STOP CK V007A,	CB & RELAY FTC;	CB ECS122 SPO	1.53E-02	RNAMOD06S
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	Z02MOD01
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
118	1.72E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
119	1.72E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
120	1.71E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			EDS1 EA 1 DISTR.	PNL FAILURE OR	T&M		3.05E-04	ED1MOD07
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
121	1.68E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
122	1.63E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
123	1.57E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			PUMP 01A FAILS;	STOP CK V007A,	CB & RELAY FTC;	CB ECS122 SPO	1.53E-02	RNAMOD06S
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GC
124	1.57E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
125	1.55E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	4.93E-04	ADN-MAN01
126	1.54E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD13
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
127	1.54E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
128	1.54E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
129	1.52E-11	.02	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
130	1.50E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01A FAILS;	STOP CK V007A,	CB & RELAY FTC;	CB ECS122 SPO	1.53E-02	RNAMOD06S
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	Z02MOD01
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
131	1.50E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
132	1.49E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
133	1.48E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			EDS1 EA 1 DISTR.	PNL FAILURE OR	T&M		3.05E-04	ED1MOD07
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
134	1.46E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.13E-05	CCX-PMAMOD1-SW
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
135	1.46E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
136	1.42E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW1OR170SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	4.93E-04	ADN-MAN01
137	1.42E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	1.93E-04	ADN-MAN01
138	1.41E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PLSMOD11
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
139	1.39E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 109	FAILS TO OPEN		{#3,5}	1.23E-02	EC1CB100VO
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	Z02MOD01
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
140	1.39E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			BREAKER 200	FAILS TO OPEN		{#5,3}	1.23E-02	EC2CB209VO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
141	1.37E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMSMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05
142	1.37E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO OPEN	OF THE STOP	CHECK VALVES		6.10E-04	RNX-KV-GO
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
143	1.36E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	Z0X-DG-DS
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1
144	1.36E-11	.02	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
145	1.35E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	Z0X-PD-ES
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
146	1.34E-11	.02	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS
147	1.33E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF LOGIC	GROUP PROCESSING			1.38E-05	CCX-PMA030X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDE FIER
148	1.33E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	／H RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	BC1CB100V0
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	BC2CB200V0
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PM
149	1.31E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01A FAILS;	STOP CK V007A,	CB & RELAY FTC	CB BCS122 SPO	1.53E-02	RNAMOD06S
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB BCS221 SPO	1.53E-02	RNBMOD07S
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.30E-05	ADX-EV-SA
150	1.25E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	YMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHM-MAN05
151	1.24E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
152	1.20E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	BC1CB100V0
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	Z02MOD01
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1
153	1.20E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	BC2CB200V0
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1
154	1.18E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.07E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
155	1.17E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	TCX-CB-GC
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
156	1.15E-11	.02	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
157	1.14E-11	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO RUN OF	ENGINE-DRIVEN	FUEL PUMPS		1.30E-04	ZOX-PD-EP
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PM

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
158	1.13E-11	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTN-R1
			PUMP 01A FAILS:	STOP CK V007A,	CB & RELAY PTC,	CB ECS122 SPO	1.53E-02	RNAMOD06S
			PUMP 01B FAILS &	ST CK V007B & C	B PTC & RE PTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GO1
159	1.13E-11	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTN-R1
			FIXED COMPONENT	FAILURES			5.04E-04	EDIMOD01
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
160	1.11E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	123A	FAILS TO OPEN		8.76E-03	IWACV123AO
			CHECK VALVE	124A	FAILS TO OPEN		8.76E-03	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
161	1.11E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	123A	FAILS TO OPEN		8.76E-03	IWACV123AO
			CHECK VALVE	125A	FAILS TO OPEN		8.76E-03	IWACV125AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
162	1.11E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		8.76E-03	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		8.76E-03	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
163	1.11E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		8.76E-03	IWACV122AO
			CHECK VALVE	125A	FAILS TO OPEN		8.76E-03	IWACV125AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
164	1.10E-11	.02	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP		INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
165	1.10E-11	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTN-R1
			PUMP MP 01B	SEGMENT HARDWARE FAILURE OR		DIVERTED FLOW	2.44E-02	RNBMOOC2
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZD1MOD01
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
166	1.09E-11	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CMF OF OUTPUT	LOGIC I/Os			1.41E-04	CCX-PL4MOD1
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
167	1.08E-11	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTN-R1
			BATTERY	DB1	UNAVAILABLE		2.10E-03	EDIMOD03
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
168	1.07E-11	.02	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP		INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
169	1.06E-11	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.10E-05	CCX-PMAMOD1-SW
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05
170	1.05E-11	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC & CB ECS221 SPO		1.53E-02	RNRMOD07S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	RC1CB100VO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
171	1.05E-11	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01A FAILS;	STOP C; V007A.	CB & RELAY FTC; CB ECS122 SPO		1.53E-02	RNAMOD06S
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	RC2CB200VO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
172	1.05E-11	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
173	1.05E-11	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
174	1.03E-11	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO OPEN		1.20E-03	ECX-CB-GO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
175	1.03E-11	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	4.93E-04	ADM-MAN01
176	1.03E-11	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW1TL170UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	4.93E-04	ADM-MAN01
177	1.03E-11	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PLSMOD11
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRK
178	1.02E-11	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-G01
179	9.97E-12	.01	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GF

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
180	9.86E-12	.01	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
			EDS3 EA 1 DISTR.	PNL FAILURE OR	T&M		3.05E-04	ED3MOD07
181	9.85E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	7TH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
182	9.82E-12	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW20R160SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
183	9.82E-12	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW10R170SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
184	9.81E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
185	9.81E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO OPEN	OF THE STOP	CHECK VALVES		6.10E-04	RNX-KV-GC
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
186	9.72E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01A	SEGMENT	HARDWARE FAILURE		7.12E-03	SWAMOD07
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
187	9.57E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	OUTPUT DRIVER			1.71E-04	RCSEPMGS01SA
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
188	9.56E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
189	9.56E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
190	9.44E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			CMF OF OUTPUT	LOGIC I/Os			1.41E-04	CCX-PL4MOD1
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-G01

Table 54B-3

CASE 1 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
191	9.13E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	Z02MOD01
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
192	9.12E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01A FAILS:	STOP CK V007A,	CB & RELAY FTC;	CB ECS122 SPO	1.53E-02	RNAMOD06S
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
193	9.12E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
194	8.91E-12	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			8.58E-05	CCX-PMAMOD2X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
195	8.88E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BV-PN
			STANDBY DG	UNAVAILABLE DUE	TO TEST AND	MAINTENANCE	4.60E-02	Z02DG002TM
196	8.46E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
197	8.42E-12	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
			FAILURE OF POWER	INTERFACE OUTPUT	BOARD		5.83E-05	IRAEP121ASAX
198	8.42E-12	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01A	SEGMENT	HARDWARE FAILURE		7.12E-03	SWAMOD07
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
199	8.36E-12	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
200	8.36E-12	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDR1TM

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Table 54B-4

BASIC EVENT IMPORTANCE - CASE 1

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SYSTEM UNAVAILABILITY (Q) =   7.C58E-08
NUMBER OF BASIC EVENTS     =   295
NUMBER OF CUTSETS          =   6634
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	BASIC EVENT	IMPORTANCE (%DECREASE)	NUMBER OF CUTSETS	DECREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1	IEV-CCWD	66.35	2122	4.6836E-08	6.0200E-04
2	ADX-EV-SA	31.73	290	2.2397E-08	3.0000E-05
3	IWX-MV-GO1	27.50	266	1.9414E-08	2.6000E-05
4	IEV-LOSPD	14.63	2450	1.0326E-08	4.4400E-03
5	IWX-FL-GP	12.96	168	9.1450E-09	1.2000E-05
6	OTH-R1	9.69	2292	6.8425E-09	4.2000E-01
7	CCX-SFTW	9.55	26	6.7434E-09	1.2000E-06
8	IEV-RNSD	8.97	1015	6.3345E-09	8.1500E-05
9	SUC-R1S	4.94	158	3.4836E-09	5.8000E-01
10	IEV-RCSOD	4.21	484	2.9711E-09	4.4400E-26
11	CCX-ORY-SPX	3.83	112	2.7053E-09	3.6300F-06
12	RHN-MAN05C	3.70	27	2.6101E-09	1.5000E-01
13	CCX-XMTRX	2.77	97	1.9519E-09	2.6300E-06
14	RHN-MAN04	2.74	123	1.9325E-09	5.5000E-02
15	IWN-MAN00C	2.66	23	1.8777E-09	5.0000E-02
16	IEV-CCWND	2.25	69	1.5863E-09	3.7500E-03
17	CCX-EP-SAM	1.97	218	1.3927E-09	8.6200E-06
18	RHN-MAN04-SUCC	1.52	399	1.0743E-09	9.4500E-01
19	REC-MANDASC	1.46	46	1.0312E-09	5.0600E-01
20	LPM-MAN05	1.38	37	9.7191E-10	6.8300E-04
21	IEV-LOCA24D	1.24	428	8.7778E-10	1.1300E-05
22	REC-MANDAS	1.22	36	8.5761E-10	1.1600E-02
23	IWB-PLUG	1.21	443	8.5150E-10	2.4000E-04
24	IWN-MAN00	1.13	189	8.0059E-10	1.1500E-03
25	MDAS	1.08	79	7.5911E-10	1.0000E-02
26	IEV-LOCA24ND	1.04	121	7.3323E-10	1.6800E-05
27	IWX-CV-AO	.94	395	6.6008E-10	3.0000E-05
28	ZOX-PD-ES	.87	113	6.1060E-10	2.0000E-03
29	CCX-BY-PN	.83	237	5.8284E-10	4.7000E-05
30	IRWMOD05S	.78	380	5.4779E-10	3.0000E-03
31	ZO1MOD01	.76	524	5.3414E-10	2.0200E-02
32	RN23MOD5S	.75	917	5.2999E-10	2.2100E-03
33	ED1MOD03	.71	131	4.9867E-10	2.2020E-03
34	IEV-LOSPND	.67	40	4.7026E-10	1.7100E-02
35	CCX-ORY-SP	.66	18	4.6569E-10	2.7700E-04
36	IEV-RNSND	.58	46	4.0677E-10	9.6100E-04
37	ECX-CB-GO	.52	92	3.6510E-10	1.2000E-03
38	RHN-MAN05	.50	785	3.5328E-10	1.6000E-03
39	SUC-R2S	.49	9	3.4566E-10	7.6000E-01
40	PL5MOD11	.48	73	3.4195E-10	2.0900E-03
41	CCX-XMTR195	.48	16	3.3742E-10	2.0100E-04
42	ZO2MOD01	.46	187	3.2753E-10	2.0200E-02
43	EC1CB100VO	.45	380	3.1668E-10	1.2300E-02
44	RNX-PM-FS	.39	50	2.7618E-10	7.7000E-04
45	PMAMOD11	.34	296	2.4119E-10	2.0900E-03
46	ECX-CB-GC	.31	74	2.2118E-10	7.3000E-04
47	RNX-KV-GO	.31	44	2.1853E-10	6.1000E-04
48	SWBMOD02	.29	150	2.0748E-10	2.4400E-02
49	RNBMOD07S	.29	146	2.0625E-10	1.5300E-02
50	EC2CB200VO	.28	144	1.9692E-10	1.2300E-02
51	CCX-INPUT-LOGIC	.27	29	1.9140E-10	1.0300E-04
52	PL50301ASA	.27	47	1.8850E-10	1.1600E-03
53	PL50301BSA	.27	47	1.8850E-10	1.1600E-03
54	RNAMOD0(S	.26	90	1.8655E-10	1.5300E-02
55	CCX-PMAMOD1X	.26	195	1.8036E-10	4.6300E-05
56	ZOX-DG-DR	.19	57	1.3222E-10	4.4000E-04
57	PMA0301ASA	.18	218	1.2936E-10	1.1600E-03
58	PMA0301BSA	.18	218	1.2936E-10	1.1600E-03
59	OTH-R2	.18	29	1.2447E-10	2.4000E-01
60	CCBMOD01S	.12	91	8.5340E-11	1.0400E-02
61	ZOX-DG-DS	.12	50	8.3609E-11	2.8000E-04
62	ED1MOD01	.11	23	8.0589E-11	5.0400E-04
63	ADN-MAN01	.11	58	7.9719E-11	4.9300E-04
64	ED1MOD11	.10	55	6.9890E-11	3.1700E-04
65	ED1MOD113	.10	55	6.9890E-11	3.1700E-04
66	SWAMOD07	.10	42	6.9016E-11	7.1200E-03

67	IDAMOD05	.10	354	6.8742E-11	5.1600E-04
68	IDDBSDD1TM	.09	350	6.4586E-11	3.0000E-04
69	IDDBSDK1TM	.09	370	6.4586E-11	3.0000E-04
70	IDDBSDS1TM	.09	370	6.4586E-11	3.0000E-04
71	CCX-PMA030X	.08	130	5.3568E-11	1.3800E-05
72	IDBBSDD1TM	.08	125	5.3536E-11	3.0000E-04
73	IDBBSDK1TM	.08	125	5.3536E-11	3.0000E-04
74	IDBBSDS1TM	.08	125	5.3536E-11	3.0000E-04
75	CCAMOD02	.08	40	5.3178E-11	7.1000E-03
76	ED1MOD13	.07	17	5.0329E-11	3.1700E-04
77	CCX-PL4MOD1	.07	17	4.9372E-11	1.4100E-04
78	ED1MOD07	.07	17	4.8478E-11	3.0500E-04
79	IWA-PLUG	.06	136	4.5067E-11	2.4000E-04
80	CCX-PMAMOD1-SW	.06	128	4.2992E-11	1.1000E-05
81	EC1REDG2GA	.06	57	4.2477E-11	4.3600E-03
82	IEV-LOCAPRND	.06	59	4.2065E-11	1.5100E-05
83	ED2MOD03	.06	68	4.1838E-11	2.7000E-03
84	IDAMOD04	.06	340	4.0934E-11	3.1700E-04
85	EC1REDG1GA	.05	39	3.8569E-11	4.3600E-03
86	ZOX-PD-ER	.05	32	3.7969E-11	1.3000E-04
87	IDABSDS1TM	.05	255	3.7163E-11	3.0000E-04
88	RNDEP023SA	.05	291	3.4971E-11	1.7100E-04
89	CCX-PL403	.05	14	3.3840E-11	9.6900E-05
90	IW1OR170SPX	.04	34	2.8797E-11	9.4600E-05
91	IW2OR160SPX	.04	34	2.8797E-11	9.4600E-05
92	CCX-PMDMOD1	.04	270	2.8108E-11	1.4100E-04
93	IWACV122AO	.04	126	2.8029E-11	8.7600E-03
94	IWACV123AO	.04	126	2.8029E-11	8.7600E-03
95	IWACV124AO	.04	126	2.8029E-11	8.7600E-03
96	IWACV125AO	.04	126	2.8029E-11	8.7600E-03
97	EC5EPMGB1SA	.04	9	2.6790E-11	1.7100E-04
98	ZO1MOD04	.04	82	2.5979E-11	1.2500E-03
99	ZO1DG001TM	.04	95	2.5243E-11	4.6000E-02
100	EC1BS001TM	.04	442	2.5138E-11	2.7000E-03
101	EC1BS012TM	.04	442	2.5138E-11	2.7000E-03
102	EC1BS121TM	.04	442	2.5138E-11	2.7000E-03
103	ED3MOD07	.03	26	2.4418E-11	3.0500E-04
104	PMAMOD11X	.03	369	2.4116E-11	6.5300E-04
105	ZO2DG002TM	.03	42	2.2865E-11	4.6000E-02
106	CCX-PL1MOD1	.03	9	2.2094E-11	1.4100E-04
107	CCX-PL7MOD1	.03	9	2.2094E-11	1.4100E-04
108	CCX-PMAMOD1	.03	87	2.1346E-11	1.4100E-04
109	IW1TL170UFX	.03	33	2.0855E-11	6.8400E-05
110	IW2TL160UFX	.03	33	2.0855E-11	6.8400E-05
111	ED3MOD03	.03	35	2.0850E-11	2.2020E-03
112	CCX-BY-PN1	.03	17	1.8431E-11	5.7000E-05
113	CCX-PMD030	.03	184	1.8183E-11	9.6900E-05
114	RNX-CV-GO	.03	12	1.7721E-11	5.1000E-05
115	ZO2MOD04	.03	44	1.7694E-11	1.2500E-03
116	ZOX-BL-ES	.02	16	1.6716E-11	6.0000E-05
117	PL4MOD11	.02	43	1.5793E-11	2.0900E-03
118	CCX-PL103	.02	7	1.5111E-11	9.6900E-05
119	CCX-PL703	.02	7	1.5111E-11	9.6900E-05
120	PL1MOD11	.02	36	1.4332E-11	2.0900E-03
121	PL7MOD11	.02	36	1.4332E-11	2.0900E-03
122	CCX-PMA030	.02	59	1.2905E-11	9.6900E-05
123	PXX-AV-LA	.02	57	1.2491E-11	6.1000E-05
124	PL5XS00ASA	.02	7	1.2481E-11	8.0000E-05
125	CCX-IV-XR	.02	132	1.2178E-11	2.4000E-05
126	SWBMOD09P	.02	31	1.2089E-11	1.8500E-03
127	CCX-EP-SAMX	.02	87	1.1380E-11	2.9400E-06
128	SWAMOD09P	.02	22	1.0838E-11	1.8500E-03
129	CCX-PMAMOD2X	.01	22	1.0555E-11	8.5800E-05
130	IRAEP121ASAX	.01	42	1.0003E-11	5.8300E-05
131	CCX-PMDMOD4	.01	133	8.2095E-12	4.9800E-05
132	PL40301ASA	.01	29	7.8139E-12	1.1600E-03
133	PL40301BSA	.01	26	7.5545E-12	1.1600E-03
134	ALL-IND-FAIL	.01	27	7.3433E-12	1.0000E-06
135	PL10301ASA	.01	25	7.2707E-12	1.1600E-03
136	PL70301ASA	.01	25	7.2707E-12	1.1600E-03
137	PL10301BSA	.01	24	7.2056E-12	1.1600E-03
138	PL70301BSA	.01	24	7.2056E-12	1.1600E-03
139	PMA0301ASAX	.01	176	5.8789E-12	1.6500E-04
140	PMA0301BSAX	.01	157	5.7396E-12	1.6500E-04
141	PMAXS00ASA	.01	28	5.5586E-12	8.0000E-05
142	RNX-PM-ER	.01	10	5.4562E-12	1.6000E-05
143	AD2MOD01	.01	21	5.0340E-12	5.5400E-02
144	AD2MOD02	.01	21	5.0340E-12	5.5400E-02
145	AD3MOD03	.01	21	5.0340E-12	5.5400E-02
146	AD3MOD04	.01	21	5.0340E-12	5.5400E-02
147	RHN-MAN03	.01	36	5.0231E-12	2.2600E-03

148	IDCBSDD1TM	.01	176	4.9447E-12	3.0000E-04
149	IDCBSDK1TM	.01	176	4.9447E-12	3.0000E-04
150	IDCBSDS1TM	.01	176	4.9447E-12	3.0000E-04
151	CCX-PM-ER	.01	10	4.7707E-12	1.4000E-05
152	SWX-PM-ER	.01	10	4.7707E-12	1.4000E-05
153	ED2MOD11	.01	20	4.3133E-12	3.1700E-04
154	EC2BS002TM	.01	187	3.9581E-12	2.7000E-03
155	EC2BS022TM	.01	187	3.9581E-12	2.7000E-03
156	EC2BS221TM	.01	187	3.9581E-12	2.7000E-03
157	IWBCV122AO	.01	184	3.8876E-12	8.7600E-03
158	IWBCV123AO	.01	184	3.8876E-12	8.7600E-03
159	IWBCV124AO	.01	184	3.8876E-12	8.7600E-03
160	IWBCV125AO	.01	184	3.8876E-12	8.7600E-03
161	CCX-IV-XR1	.01	6	3.7030E-12	2.4000E-05
162	CCX-PL4MOD1-SW	.01	8	3.6009E-12	1.1000E-05
163	PMAMOD12X	.00	123	3.4291E-12	6.5300E-04
164	ED3MOD01	.00	10	3.2503E-12	5.0400E-04
165	CCX-INPUT-LOGICX	.00	12	3.1284E-12	2.5900E-05
166	PMAXS00ASAX	.00	158	3.1161E-12	8.0000E-05
167	CCX-EP-SA	.00	8	2.8215E-12	8.6200E-06
168	EC1MOD01	.00	16	2.6423E-12	2.0200E-04
169	PMDMOD11	.00	206	2.6317E-12	2.0900E-03
170	PL4MOD12	.00	16	2.6108E-12	2.0900E-03
171	IDBFD013RQ	.00	10	2.0343E-12	1.2000E-05
172	IDBFD014RQ	.00	10	2.0343E-12	1.2000E-05
173	EC2MOD01	.00	14	2.0179E-12	2.0200E-04
174	CCX-LS-FA	.00	32	1.7374E-12	5.3700E-06
175	IDAMOD08	.00	96	1.6454E-12	3.1700E-04
176	CCX-PL1MOD1-SW	.00	4	1.5710E-12	1.1000E-05
177	CCX-PL7MOD1-SW	.00	4	1.5710E-12	1.1000E-05
178	IDDFD019RQ	.00	58	1.4450E-12	1.2000E-05
179	IDDFD020RQ	.00	58	1.4450E-12	1.2000E-05
180	ZON-MAN01	.00	7	1.3393E-12	2.6700E-03
181	CCX-IN-LOGIC-SW	.00	8	1.3228E-12	1.1000E-05
182	CCX-PMAMOD2-SW	.00	8	1.3228E-12	1.1000E-05
183	CCX-PMDMOD1-SW	.00	56	1.3217E-12	1.1000E-05
184	CCX-PMDMOD4-SW	.00	56	1.3217E-12	1.1000E-05
185	RNAEPRNPSA	.00	9	1.3107E-12	1.7100E-04
186	RNBEPRNPSA	.00	9	1.3107E-12	1.7100E-04
187	CCX-PMAMOD4	.00	41	1.2623E-12	4.9800E-05
188	SWNTP001RI	.00	5	1.2469E-12	5.2300E-03
189	SWB-MAN02	.00	4	1.1959E-12	1.6000E-03
190	PMD0301ASA	.00	134	1.1637E-12	1.1600E-03
191	PMAMOD21X	.00	14	1.1450E-12	1.1600E-03
192	SW7EPSBPASA	.00	7	1.1083E-12	1.7100E-04
193	CCB-MAN01	.00	6	1.1010E-12	1.0700E-03
194	PL1MOD12	.00	7	1.0618E-12	2.0900E-03
195	PL7MOD12	.00	7	1.0618E-12	2.0900E-03
196	PMD0301BSA	.00	117	1.0526E-12	1.1600E-03
197	DG2-LOGIC	.00	1	9.6501E-13	5.0000E-03
198	PMDMOD12	.00	86	9.0394E-13	2.0900E-03
199	IRAEP121BSAX	.00	66	8.9639E-13	5.8300E-05
200	PL40302ASA	.00	7	8.6231E-13	1.1600E-03
201	CCNTF101RI	.00	5	8.4999E-13	5.2300E-03
202	IDBBSDD1LF	.00	7	8.1146E-13	4.8000E-06
203	IDBBSDK1LF	.00	7	8.1146E-13	4.8000E-06
204	IDBBSDS1LF	.00	7	8.1146E-13	4.8000E-06
205	CC1EPSBPASA	.00	6	7.6561E-13	1.7100E-04
206	PMA0302ASAX	.00	59	7.3963E-13	1.6500E-04
207	DAS	.00	4	7.3730E-13	1.0000E-02
208	ZO1MOD03	.00	8	7.3574E-13	1.0000E-04
209	CC1EPSBPBSA	.00	5	6.3893E-13	1.7100E-04
210	SW7EPSBPBSA	.00	5	6.3893E-13	1.7100E-04
211	CCX-AV-LA	.00	5	6.2306E-13	6.1000E-05
212	ED1BSDS1LF	.00	3	6.0907E-13	4.8000E-06
213	PL40302BSA	.00	4	6.0296E-13	1.1600E-03
214	PMA0302BSAX	.00	40	6.0041E-13	1.6500E-04
215	ADX-MV-GO	.00	4	5.9086E-13	1.1000E-03
216	SW7EPCTFASA	.00	4	5.7998E-13	1.7100E-04
217	SW7EPCTFBSA	.00	4	5.7998E-13	1.7100E-04
218	CMX-VS-FA	.00	7	5.2991E-13	3.8400E-05
219	CMX-CV-GO	.00	4	5.2014E-13	5.1000E-05
220	ED3BSDS1TM	.00	1	4.8805E-13	3.0000E-04
221	IDDBSDD1LF	.00	31	4.7840E-13	4.8000E-06
222	IDDBSDK1LF	.00	31	4.7840E-13	4.8000E-06
223	IDDBSDS1LF	.00	31	4.7840E-13	4.8000E-06
224	IWNTK001AF	.00	5	4.7595E-13	2.4000E-05
225	PMDMOD41	.00	67	4.6219E-13	6.3500E-04
226	RC1OR195SP	.00	4	4.5386E-13	7.2200E-03
227	ZO2MOD03	.00	5	4.3032E-13	1.0000E-04
228	EC1MOD12	.00	66	4.2799E-13	4.8000E-05

229	CCX-PMDEH0	.00	29	4.0001E-13	4.0300E-06
230	PRAAV108LA	.00	11	3.4428E-13	7.0900E-03
231	PRBAV108LA	.00	11	3.4428E-13	1.0900E-03
232	PMD0302ASA	.00	46	3.4162E-13	1.1600E-03
233	IDDMOD33	.00	45	3.3173E-13	5.1600E-04
234	RC1TL195UF	.00	3	3.2829E-13	5.2300E-03
235	PL10302ASA	.00	3	3.1919E-13	1.1600E-03
236	PL70302ASA	.00	3	3.1919E-13	1.1600E-03
237	IDAMOD06	.00	48	3.1330E-13	4.3200E-05
238	IDDMOD32	.00	58	3.0864E-13	3.1700E-04
239	CCX-BC-SA	.00	5	2.8300E-13	8.4000E-06
240	IDAMOD02	.00	31	2.7167E-13	2.7000E-03
241	IDAMOD03	.00	31	2.7167E-13	2.7000E-03
242	CCX-PMAMOD4-SW	.00	12	2.5979E-13	1.1000E-05
243	PL10302BSA	.00	2	2.5402E-13	1.1600E-03
244	PL70302BSA	.00	2	2.5402E-13	1.1600E-03
245	PL1MOD51	.00	2	2.4403E-13	8.7400E-04
246	CCX-HE-AF	.00	3	2.3115E-13	1.2000E-06
247	PMD0302BSA	.00	29	2.3048E-13	1.1600E-03
248	PL1XS00ASA	.00	3	2.1649E-13	8.0000E-05
249	PL4XS00ASA	.00	3	2.1649E-13	8.0000E-05
250	PL7XS00ASA	.00	3	2.1649E-13	8.0000E-05
251	PRₓ-MAN01	.00	4	1.8641E-13	4.0800E-04
252	PLMMOD41	.00	2	1.7897E-13	6.3500E-04
253	EC2MOD22	.00	17	1.5954E-13	4.8000E-05
254	PRAAV108TM	.00	9	1.5754E-13	5.0000E-04
255	PRBAV108TM	.00	9	1.5754E-13	5.0000E-04
256	IDCFD007RQ	.00	18	1.5343E-13	1.2000E-05
257	IDCFD008RQ	.00	18	1.5343E-13	1.2000E-05
258	PMAMOD22X	.00	2	1.4211E-13	1.1600E-03
259	CCX-XMTR	.00	3	1.3822E-13	2.0100E-04
260	PMAMOD41	.00	34	1.3656E-13	6.3500E-04
261	IDABSDS1LF	.00	24	1.2790E-13	4.8000E-06
262	IDDMOD38	.00	31	1.1813E-13	3.1700E-04
263	CCX-TRNSM	.00	2	1.0192E-13	2.0100E-04
264	EC1MOD121	.00	24	1.0159E-13	1.6800E-05
265	EC1MOD13	.00	2	9.6145E-14	4.8000E-05
266	EC2MOD23	.00	2	9.6145E-14	4.8000E-05
267	CCX-PMAEHOX	.00	14	9.4591E-14	4.0300E-06
268	DG1-LOGIC	.00	1	9.0039E-14	5.0000E-03
269	PMDXS00ASA	.00	32	6.9944E-14	8.0000E-05
270	ZOX-BL-ER	.00	1	6.5947E-14	1.3600E-06
271	ED2MOD01	.00	1	6.5170E-14	5.0400E-04
272	ZOX-FL-GP	.00	1	6.2950E-14	1.3000E-06
273	PMDEH0A1SA	.00	28	6.1395E-14	8.0000E-05
274	IDCBSDD1LF	.00	12	5.3346E-14	4.8000E-06
275	IDCBSDK1LF	.00	12	5.3846E-14	4.8000E-06
276	IDCBSDS1LF	.00	12	5.3846E-14	4.8000E-06
277	IDAMOD07	.00	15	5.2292E-14	2.1900E-02
278	IDDMOD21	.00	6	4.9960E-14	1.9200E-04
279	PMDMOD42	.00	11	4.0523E-14	6.3500E-04
280	IDABSDD1TM	.00	3	2.4980E-14	3.0000E-04
281	IDABSDK1TM	.00	3	2.4980E-14	3.0000E-04
282	PRX-HR-ML	.00	4	2.3759E-14	1.2000E-07
283	ZANMOD01	.00	8	1.9984E-14	8.4000E-05
284	EC1BS001LF	.00	7	1.8319E-14	4.8000E-06
285	PMDEH0A2SA	.00	10	1.7431E-14	8.0000E-05
286	IDDMOD34	.00	10	1.2101E-14	4.3200E-05
287	PMAEH0A1SAX	.00	6	1.0325E-14	8.0000E-05
288	PMAMOD42	.00	4	9.6589E-15	6.3500E-04
289	IDDMOD35	.00	4	5.7732E-15	2.1900E-02
290	EC2MOD221	.00	3	1.3323E-15	1.6800E-05
291	IWX-XMTRLW	.00	2	1.2212E-15	9.2000E-09
292	IDDMOD22	.00	3	9.9920E-16	2.7000E-03
293	IDDMOD23	.00	3	9.9920E-16	2.7000E-03
294	PRCEP108SA	.00	1	2.2204E-16	1.7100E-04
295	PRDEP108SA	.00	1	2.2204E-16	1.7100E-04

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            SYSTEM UNAVAILABILITY (Q)  =  7.058E-08
            NUMBER OF BASIC EVENTS     =  295
            NUMBER OF CUTSETS          =  6834
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	BASIC EVENT	IMPORTANCE (%INCREASE)	NUMBER OF CUTSETS	INCREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1	CCX-SFTW	7.961444E+06	26	5.6195E-03	1.2000E-06
2	IWX-FL-GP	1.079667E+06	168	7.6208E-04	1.2000E-05
3	IWX-MV-GO1	1.057835E+06	266	7.4666E-04	2.6000E-05
4	ADX-EV-SA	1.057684E+06	290	7.4656E-04	3.0000E-05
5	CCX-ORY-SPX	1.055829E+06	112	7.4525E-04	3.6300E-06
6	CCX-XMTRX	1.051485E+06	97	7.4218E-04	3.6300E-06
7	IEV-RCSOD	948041.	484	6.6917E-04	4.4400E-06
8	CCX-EP-SAM	228896.	218	1.6156E-04	8.6200E-06
9	IEV-CCWD	110158.	2122	7.7754E-05	6.0200E-04
10	IEV-RNSD	110106.	1015	7.7718E-05	8.1500E-05
11	IEV-LOCA24D	110051.	428	7.7679E-05	1.1300E-05
12	IEV-LOCA24ND	61832.6	121	4.3644E-05	1.6800E-05
13	IWX-CV-AO	31171.5	395	2.2002E-05	3.0000E-05
14	CCX-BY-PN	17668.0	237	1.2400E-05	4.7000E-05
15	ALL-IND-FAIL	10403.6	27	7.3433E-06	1.0000E-06
16	CCX-PMAMOD1-SW	5537.16	128	3.9084E-06	1.1000E-05
17	CCX-PMAMOD1X	5518.75	195	3.8954E-06	4.6300E-05
18	CCX-PMA030X	5499.37	130	3.8817E-06	1.3800E-05
19	CCX-EP-SAMX	5484.01	87	3.8709E-06	2.9400E-06
20	IWB-PLUG	5025.32	443	3.5471E-06	2.4000E-04
21	IEV-LOCAPRND	3946.65	59	2.7857E-06	1.5100E-05
22	IEV-LOSPD	3280.31	2450	2.3154E-06	4.4400E-03
23	CCX-INPUT-LOGIC	2632.46	29	1.8581E-06	1.0300E-04
24	CCX-ORY-SP	2381.19	18	1.680E-6	2.7700E-04
25	CCX-XMTR195	2377.85	16	1.6784E-06	2.0100E-04
26	LPM-MAN05	2014.66	37	1.4220E-06	6.8300E-04
27	IWN-MAN00	985.152	189	6.9536E-07	1.1500E-03
28	CCX-IV-XR	718.885	132	5.0742E-07	2.4000E-05
29	IEV-RNSND	599.100	46	4.2287E-07	9.6100E-04
30	IEV-CCWND	597.050	69	4.2142E-07	3.7500E-03
31	RNX-PM-FS	507.769	50	3.5841E-07	7.7000E-04
32	RNX-KV-GO	507.244	44	3.5803E-07	6.1000E-04
33	CCX-PL4MOD1	496.011	17	3.5011E-07	1.4100E-04
34	CCX-PL403	496.712	14	3.4919E-07	9.6900E-05
35	RNX-CV-GO	492.266	12	3.4746E-07	5.1000E-05
36	RNX-PM-ER	483.120	10	3.4101E-07	1.6000E-05
37	CCX-PM-ER	482.774	10	3.4076E-07	1.4000E-05
38	SWX-PM-ER	482.774	10	3.4076E-07	1.4000E-05
39	CCX-PL4MOD1-SW	463.773	8	3.2735E-07	1.1000E-05
40	CCX-EP-SA	463.729	8	3.2732E-07	8.6200E-06
41	CCX-LS-FA	458.366	32	3.2353E-07	5.3700E-06
42	CCX-BY-PN1	458.089	17	3.2334E-07	5.7000E-05
43	IW1TL170UFX	431.933	33	3.0488E-07	6.8400E-05
44	IW2TL160UFX	431.933	33	3.0488E-07	6.8400E-05
45	ZOX-PD-ES	431.667	113	3.0469E-07	2.0000E-03
46	IW1OR170SPX	431.229	34	3.0438E-07	9.4600E-05
47	IW2OR160SPX	431.229	34	3.0438E-07	9.4600E-05
48	ECX-CB-GO	430.529	92	3.0389E-07	1.2000E-03
49	ECX-CB-GC	428.942	74	3.0277E-07	7.3000E-04
50	ZOX-DG-DR	425.533	57	3.0036E-07	4.4000E-04
51	ZOX-DG-DS	422.929	50	2.9852E-07	2.8000E-04
52	ZOX-PD-ER	413.730	32	2.9203E-07	1.3000E-04
53	ZOX-BL-ES	394.681	16	2.7858E-07	6.0000E-05
54	RN23MOD5S	339.003	917	2.3928E-07	2.2100E-03
55	ED1MOD03	320.131	131	2.2596E-07	2.2020E-03
56	RHN-MAN05	312.316	785	2.2045E-07	1.6000E-03
57	ED1MOD11	312.255	55	2.2040E-07	3.1700E-04
58	ED1MOD113	312.255	55	2.2040E-07	3.1700E-04
59	IDDBSDD1TM	304.915	370	2.1522E-07	3.0000E-04
60	IDDBSDK1TM	304.915	370	2.1522E-07	3.0000E-04
61	IDDBSDS1TM	304.915	370	2.1522E-07	3.0000E-04
62	PXX-AV-LA	290.101	57	2.0477E-07	6.1000E-05
63	RNDEP023SA	289.685	291	2.0447E-07	1.7100E-04
64	CCX-PMDMOD1	282.383	270	1.9932E-07	1.4100E-04
65	IWNTK001AF	280.959	5	1.9831E-07	2.4000E-06
66	PRX-HR-ML	280.501	4	1.9799E-07	1.2000E-07
67	CCX-HE-AF	272.898	3	1.9262E-07	1.2000E-06
68	IWA-PLUG	265.973	136	1.8773E-07	2.4000E-04
69	CCX-PMD030	265.821	184	1.8763E-07	9.6900E-05
70	IRWMOD05S	257.915	380	1.8205E-07	3.0000E-03
71	IDBBSDD1TM	252.749	125	1.7840E-07	3.0000E-04

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72	IDBBSDK1TM	252.749	125	1.7840E-07	3.0000E-04
73	IDBBSDS1TM	252.749	125	1.7840E-07	3.0000E-04
74	IRAEP121ASAX	243.079	42	1.7158E-07	5.8300E-05
75	IDBFD013RQ	240.166	10	1.6952E-07	1.2000E-05
76	IDBFD014RQ	240.166	10	1.6952E-07	1.2000E-05
77	IDBBSDD1LF	239.506	7	1.6905E-07	4.8000E-06
78	IDBBSDK1LF	239.506	7	1.6905E-07	4.8000E-06
79	IDBBSDS1LF	239.506	7	1.6905E-07	4.8000E-06
80	CCX-PMDMOD4	233.539	133	1.6484E-07	4.9800E-05
81	PL5MOD11	231.311	73	1.6327E-07	2.0900E-03
82	PL50301ASA	229.951	47	1.6231E-07	1.1600E-03
83	PL50301BSA	229.951	47	1.6231E-07	1.1600E-03
84	ADN-MAN01	228.977	58	1.6162E-07	4.9300E-04
85	ED1MOD01	226.422	23	1.5982E-07	5.0400E-04
86	ED1MOD07	225.113	17	1.5889E-07	3.0500E-04
87	ED1MOD13	224.858	17	1.5871E-07	3.1700E-04
88	CCX-PL1MOD1	221.969	9	1.5668E-07	1.4100E-04
89	CCX-PL7MOD1	221.969	9	1.5668E-07	1.4100E-04
90	EC5EPMGB1SA	221.915	9	1.5664E-07	1.7100E-04
91	PL5XS00ASA	221.013	7	1.5600E-07	8.0000E-05
92	CCX-PL103	220.912	7	1.5593E-07	9.6900E-05
93	CCX-PL703	220.912	7	1.5593E-07	9.6900E-05
94	CCX-IV-XR1	218.589	6	1.5429E-07	2.4000E-05
95	CCX-PMAMOD1	214.447	87	1.5137E-07	1.4100E-04
96	CCX-PL1MOD1-SW	202.330	4	1.4281E-07	1.1000E-05
97	CCX-PL7MOD1-SW	202.330	4	1.4281E-07	1.1000E-05
98	CCX-PMA030	188.668	59	1.3317E-07	9.6900E-05
99	IDAMOD05	188.642	354	1.3315E-07	5.1600E-04
100	IWX-XMTRLW	188.065	2	1.3274E-07	9.2000E-09
101	IDAMOD04	182.887	340	1.2909E-07	3.1700E-04
102	ED1BSDS1LF	179.769	3	1.2689E-07	4.8000E-06
103	IDABSDS1TM	175.449	255	1.2384E-07	3.0000E-04
104	CCX-PMAMOD2X	174.264	22	1.2300E-07	8.5800E-05
105	CCX-INPUT-LOGICX	171.120	12	1.2078E-07	2.5900E-05
106	IDDFD019RQ	170.592	58	1.2041E-07	1.2000E-05
107	IDDFD020RQ	170.592	58	1.2041E-07	1.2000E-05
108	CCX-IN-LOGIC-SW	170.372	8	1.2026E-07	1.1000E-05
109	CCX-PMAMOD2-SW	170.372	8	1.2026E-07	1.1000E-05
110	CCX-PMDMOD1-SW	170.229	56	1.2016E-07	1.1000E-05
111	CCX-PMDMOD4-SW	170.229	56	1.2016E-07	1.1000E-05
112	PMAMOD11	163.156	296	1.1516E-07	2.0900E-03
113	PMA0301ASA	157.806	218	1.1139E-07	1.1600E-03
114	PMA0301BSA	157.806	218	1.1139E-07	1.1600E-03
115	IDDBSDD1LF	141.200	31	9.9665E-08	4.8000E-06
116	IDDBSDK1LF	141.200	31	9.9665E-08	4.8000E-06
117	IDDBSDS1LF	141.200	31	9.9665E-08	4.8000E-06
118	CCX-PMDEH0	140.624	29	9.9258E-08	4.0300E-06
119	ED3MOD07	113.390	26	8.0035E-08	3.0500E-04
120	MDAS	106.471	79	7.5152E-08	1.0000E-02
121	REC-MANDAS	103.528	36	7.3074E-08	1.1600E-02
122	PMAXS00ASA	98.4303	28	6.9476E-08	8.0000E-05
123	ZOX-BL-ER	68.6988	1	4.8491E-08	1.3600E-06
124	ZOX-FL-GP	68.6027	1	4.8423E-08	1.3000E-06
125	PMAXS00ASAX	55.1790	158	3.8948E-08	8.0000E-05
126	PMAMOD11X	52.2884	369	3.6907E-08	6.5300E-04
127	IWN-MAN00C	50.5432	23	3.5676E-08	5.0000E-02
128	PMA0301ASAX	50.4695	176	3.5624E-08	1.6500E-04
129	PMA0301BSAX	49.2743	157	3.4780E-08	1.6500E-04
130	CCX-BC-SA	47.7297	5	3.3690E-08	8.4000E-06
131	RHN-MAN04	47.0422	123	3.3204E-08	5.5000E-02
132	IEV-LOSPND	38.2953	40	2.7030E-08	1.7100E-02
133	IDABSDS1LF	37.7495	24	2.6645E-08	4.8000E-06
134	ZO1MOD01	36.7058	524	2.5909E-08	2.0200E-02
135	EC1CB100VO	36.0271	380	2.5429E-08	1.2300E-02
136	CCX-PMAMOD4	35.9097	41	2.5347E-08	4.9800E-05
137	CCX-PMAMOD4-SW	33.4596	12	2.3617E-08	1.1000E-05
138	CCX-PMAEH0X	33.2533	11	2.3472E-08	4.0300E-06
139	ZO1MOD04	29.4080	82	2.0757E-08	1.2500E-03
140	IDCBSDD1TM	23.3443	176	1.6477E-08	3.0000E-04
141	IDCBSDK1TM	23.3443	176	1.6477E-08	3.0000E-04
142	IDCBSDS1TM	23.3443	176	1.6477E-08	3.0000E-04
143	ZO2MOD01	22.5074	187	1.5887E-08	2.0200E-02
144	EC2CB200VO	22.4030	144	1.5813E-08	1.2300E-02
145	ED2MOD03	21.8941	68	1.5454E-08	2.7000E-03
146	IRAEP121BSAX	21.7820	66	1.5375E-08	5.8300E-05
147	RHN-MAN05C	20.9545	27	1.4791E-08	1.5000E-01
148	ZO2MOD04	20.0297	44	1.4138E-08	1.2500E-03
149	CMX-VS-FA	19.5500	7	1.3799E-08	3.8400E-05
150	ED2MOD11	19.2711	20	1.3602E-08	3.1700E-04
151	RNBMOD07S	18.8062	146	1.3274E-08	1.5300E-02
152	EC1MOD01	18.5285	16	1.3078E-08	2.0200E-04

153	IDCFD007RQ	18.1144	18	1.2786E-08	1.2000E-05
154	IDCFD008RQ	18.1144	18	1.2786E-08	1.2000E-35
155	RNAMOD06S	17.0102	90	1.2007E-08	1.5300E-02
156	IDCBSDD1LF	15.8928	12	1.1218E-08	4.8000E-06
157	IDCBSDK1LF	15.8928	12	1.1218E-08	4.8000E-06
158	IDCBSDS1LF	15.8928	12	1.1218E-08	4.8000E-06
159	CCX-AV-LA	14.4698	5	1.0213E-08	6.1000E-05
160	CMX-CV-GO	14.4484	4	1.0198E-08	5.1000E-05
161	EC2MOD01	14.1502	14	9.9878E-09	2.0200E-04
162	EC1REDG2GA	13.7424	57	9.7000E-09	4.3600E-03
163	SWAMOD07	13.6352	42	9.6243E-09	7.1200E-03
164	OTH-R1	13.3871	2292	9.4492E-09	4.2000E-01
165	ED3MOD03	13.3849	35	9.4476E-09	2.2020E-03
166	EC1BS001TM	13.1546	442	9.2851E-09	2.7000E-03
167	EC1BS012TM	13.1546	442	9.2851E-09	2.7000E-03
168	EC1BS121TM	13.1546	442	9.2851E-09	2.7000E-03
169	EC1MOD12	12.6318	66	8.9161E-09	4.8000E-05
170	EC1REDG1GA	12.4780	39	8.8075E-09	4.3600E-03
171	SWBMOD02	11.7533	150	8.2960E-09	2.4400E-02
172	CCBMOD01S	11.5046	91	8.1204E-09	1.0400E-02
173	RNAEPRNPSA	10.8576	9	7.6638E-09	1.7100E-04
174	RNBEPRNPSA	10.8576	9	7.6638E-09	1.7100E-04
175	PL4MOD11	10.6835	43	7.5409E-09	2.0900E-03
176	CCAMOD02	10.5359	40	7.4367E-09	7.1000E-03
177	ZO1MOD03	10.4226	8	7.3567E-09	1.0000E-04
178	IDAMOD06	10.2744	48	7.2521E-09	4.3200E-05
179	PL1MOD11	9.69467	36	6.8429E-09	2.0900E-03
180	PL7MOD11	9.69467	36	6.8429E-09	2.0900E-03
181	PL40301ASA	9.53225	29	6.7283E-09	1.1600E-03
182	SWBMOD09P	9.24056	31	6.5224E-09	1.8500E-03
183	PL40301BSA	9.21587	26	6.5050E-09	1.1600E-03
184	SW7EPSBPASA	9.18106	7	6.4804E-09	1.7100E-04
185	ED3MOD01	9.13197	10	6.4457E-09	5.0400E-04
186	PL10301ASA	8.86969	25	6.2606E-09	1.1600E-03
187	PL70301ASA	8.86969	25	6.2606E-09	1.1600E-03
188	PL10301BSA	8.79019	24	6.2045E-09	1.1600E-03
189	PL70301BSA	8.79019	24	6.2045E-09	1.1600E-03
190	EC1MOD121	8.56656	24	6.0466E-09	1.6800E-05
191	SWAMOD09P	8.28448	22	5.8475E-09	1.8500E-03
192	PMAMOD12X	7.43500	123	5.2479E-09	6.5300E-04
193	IDAMOD08	7.35112	96	5.1887E-09	3.1700E-04
194	PMA0302ASAX	6.34967	59	4.4819E-09	1.6500E-04
195	CC1EPSBPASA	6.34204	6	4.4765E-09	1.7100E-04
196	ZO2MOD03	6.09597	5	4.3028E-09	1.0000E-04
197	EC1BS001LF	5.40683	7	3.8164E-09	4.8000E-06
198	CC1EPSBPBSA	5.29270	5	3.7358E-09	1.7100E-04
199	SW7EPSBPBSA	5.29270	5	3.7358E-09	1.7100E-04
200	PMA0302BSAX	5.15446	40	3.6382E-09	1.6500E-04
201	SW7EPCTFASA	4.80435	4	3.3911E-09	1.7100E-04
202	SW7EPCTFBSA	4.80435	4	3.3911E-09	1.7100E-04
203	EC2MOD22	4.70865	17	3.3236E-09	4.8000E-05
204	IWACV122AO	4.49334	126	3.1716E-09	8.7600E-03
205	IWACV123AO	4.49334	126	3.1716E-09	8.7600E-03
206	IWACV124AO	4.49334	126	3.1716E-09	8.7600E-03
207	IWACV125AO	4.49334	126	3.1716E-09	8.7600E-03
208	PL1XS00ASA	3.83365	3	2.7060E-09	8.0000E-05
209	PL4XS00ASA	3.83365	3	2.7060E-09	8.0000E-05
210	PL7XS00ASA	3.83365	3	2.7060E-09	8.0000E-05
211	SUC-R1S	3.57392	158	2.5226E-09	5.8000E-01
212	RHN-MAN03	3.14175	36	2.2176E-09	2.2600E-03
213	EC1MOD13	2.83764	2	2.0029E-09	4.8000E-05
214	EC2MOD23	2.83764	2	2.0029E-09	4.8000E-05
215	ED3BSDS11M	2.30414	1	1.6264E-09	3.0000E-04
216	EC2BS002TM	2.07127	187	1.4620E-09	2.7000E-03
217	EC2BS022TM	2.07127	187	1.4620E-09	2.7000E-03
218	EC2BS221TM	2.07127	187	1.4620E-09	2.7000E-03
219	PMDMOD11	1.78020	206	1.2565E-09	2.0900E-03
220	PL4MOD12	1.76608	16	1.2466E-09	2.0900E-03
221	CCB-MAN01	1.45624	6	1.0279E-09	1.0700E-03
222	REC-MANDASC	1.42628	46	1.0067E-09	5.0600E-01
223	PMD0301ASA	1.41966	134	1.0021E-09	1.1600E-03
224	PMAMOD21X	1.39677	14	9.8590E-10	1.1600E-03
225	IDDMOD32	1.37895	58	9.7333E-10	3.1700E-04
226	PMD0301BSA	1.28409	117	9.0636E-10	1.1600E-03
227	PMDXS00ASA	1.23856	32	8.7423E-10	8.0000E-05
228	PMDEH0A1FA	1.08718	28	7.6738E-10	8.0000E-05
229	SWB-MAN02	1.05726	4	7.4626E-10	1.6000E-03
230	PL40302ASA	1.05195	7	7.4251E-10	1.1600E-03
231	PMDMOD41	1.03053	67	7.2739E-10	6.3500E-04
232	CCX-XMTR	.974065	3	6.8754E-10	2.0100E-04
233	IDDMOD33	.910351	45	6.4256E-10	5.1600E-04

234	ADX-MV-GO	.760162	4	5.3656E-10	1.1000E-03
235	ZO1DG001TM	.741683	95	5.2351E-10	4.6000E-02
236	PL40302BSA	.735563	4	5.1919E-10	1.1600E-03
237	PL1MOD12	.718268	7	5.0698E-10	2.0900E-03
238	PL7MOD12	.718268	7	5.0698E-10	2.0900E-03
239	CCX-TRNSM	.718227	2	5.0696E-10	2.0100E-04
240	ZON-MAN01	.708737	7	5.0026E-10	2.6700E-03
241	ZO2DG002TM	.671832	42	4.7421E-10	4.6000E-02
242	PRN-MAN01	.647017	4	4.5669E-10	4.0800E-04
243	IWBCV122AO	.623223	184	4.3990E-10	8.7600E-03
244	IWBCV123AO	.623223	184	4.3990E-10	8.7600E-03
245	IWBCV124AO	.623223	184	4.3990E-10	8.7600E-03
246	IWBCV125AO	.623223	184	4.3990E-10	8.7600E-03
247	PMDMOD12	.611475	86	4.3160E-10	2.0900E-03
248	OTH-R2	.558414	29	3.9415E-10	2.4000E-01
249	IDDMOD38	.527773	31	3.7252E-10	3.1700E-04
250	PRAAV108LA	.446996	11	3.1551E-10	1.0900E-03
251	PRBAV108LA	.446996	11	3.1551E-10	1.0900E-03
252	PRAAV108TM	.446167	9	3.1492E-10	5.0000E-04
253	PRBAV108TM	.446167	9	3.1492E-10	5.0000E-04
254	PMD0302ASA	.416742	46	2.9415E-10	1.1600E-03
255	PLMMOD41	.399041	2	2.8166E-10	6.3500E-04
256	IDDMOD34	.396850	10	2.8011E-10	4.3200E-05
257	PL1MOD51	.395220	2	2.7896E-10	8.7400E-04
258	PL10302ASA	.389384	3	2.7484E-10	1.1600E-03
259	PL70302ASA	.389384	3	2.7484E-10	1.1600E-03
260	IDDMOD21	.368579	6	2.6016E-10	1.9200E-04
261	ZANMOD01	.337023	8	2.3788E-10	8.4000E-05
262	SWNTP001RI	.336002	5	2.3716E-10	5.2300E-03
263	PL10302BSA	.309882	2	2.1873E-10	1.1600E-03
264	PL70302BSA	.309882	2	2.1873E-10	1.1600E-03
265	PMDEH0A2SA	.308658	10	2.1786E-10	8.0000E-05
266	PMAMOD41	.304479	34	2.1491E-10	6.3500E-04
267	PMD0302BSA	.281169	29	1.9846E-10	1.1600E-03
268	DG2-LOGIC	.272066	1	1.9204E-10	5.0000E-03
269	CCNTF101RI	.229047	5	1.6167E-10	5.2300E-03
270	ED2MOD01	.183101	1	1.2924E-10	5.0400E-04
271	PMAEH0A1SAX	.182835	6	1.2905E-10	8.0000E-05
272	PMAMOD22X	.173360	2	1.2237E-10	1.1600E-03
273	SUC-R2S	.154648	9	1.0916E-10	7.6000E-01
274	IDAMOD02	.142167	31	1.0035E-10	2.7000E-03
275	IDAMOD03	.142167	31	1.0035E-10	2.7000E-03
276	AD2MOD01	.121602	21	8.5832E-11	5.5400E-02
277	AD2MOD02	.121602	21	8.5832E-11	5.5400E-02
278	AD3MOD03	.121602	21	8.5832E-11	5.5400E-02
279	AD3MOD04	.121602	21	8.5832E-11	5.5400E-02
280	IDABSDD1TM	.117932	3	8.3242E-11	3.0000E-04
281	IDABSDK1TM	.117932	3	8.3242E-11	3.0000E-04
282	EC2MOD221	.112348	3	7.9300E-11	1.6800E-05
283	DAS	.103412	4	7.2993E-11	1.0000E-02
284	PMDMOD42	9.035359E-02	11	6.3775E-11	6.3500E-04
285	RHN-MAN04-SUCC	8.857936E-02	399	6.2523E-11	9.4500E-01
286	RC1TL195UF	8.846562E-02	3	6.2443E-11	5.2300E-03
287	RC1OR195SP	8.841559E-02	4	6.2408E-11	7.2200E-03
288	DG1-LOGIC	2.538494E-02	1	1.7918E-11	5.0000E-03
289	PMAMOD42	2.153634E-02	4	1.5201E-11	6.3500E-04
290	IDAMOD07	3.308737E-03	15	2.3354E-12	2.1900E-02
291	PRCEP108SA	1.839339E-03	1	1.2983E-12	1.7100E-04
292	PRDEP108SA	1.839339E-03	1	1.2983E-12	1.7100E-04
293	IDDMOD22	5.228856E-04	3	3.6908E-13	2.7000E-03
294	IDDMOD23	5.228856E-04	3	3.6908E-13	2.7000E-03
295	IDDMOD35	3.652958E-04	4	2.5784E-13	2.1900E-02

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

Reduced Sum of Cutsets: 4.8040E-07

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
1	6.96E-08	14.49	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
2	4.44E-08	9.24	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.00E-05	ADX-EV-SA
3	3.85E-08	8.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023				2.60E-05	IWP-MV-G01
4	3.55E-08	7.39	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			COMMON CAUSE	FAILURE OF THE	INVERTER		2.40E-05	CCX-IV-XR
5	2.83E-08	5.89	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
6	1.81E-08	3.77	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.00E-05	ADX-EV-SA
7	1.78E-08	3.71	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
8	1.57E-08	3.27	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023				2.60E-05	IWX-MV-G01
9	1.44E-08	3.00	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COMMON CAUSE	FAILURE OF THE	INVERTER		2.40E-05	CCX-IV-XR
10	1.28E-08	2.66	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			CCF OF THE POWER INTERFACE OUTPUT BOARDS IN PMS				8.62E-06	CCX-EP-SAM
11	7.22E-09	1.50	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
12	6.84E-09	1.42	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
13	6.46E-09	1.34	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			PMDMOD11				2.09E-03	PMDMOD11
14	6.02E-09	1.25	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		4.07E-03	PMAMOD21
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
15	5.37E-09	1.12	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
16	5.19E-09	1.08	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF THE POWER INTERFACE OUTPUT BOARDS IN PMS				8.62E-06	CCX-EP-SAM
17	4.95E-09	1.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05

Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
18	4.20E-09	.87	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP	INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
19	3.--	.81	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
20	3.83E-09	.80	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
21	3.79E-09	.79	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MODSS
22	3.79E-09	.79	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MODSS
23	3.59E-09	.75	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			PMDMOD11				2.09E-03	PMDMOD11
24	3.59E-09	.75	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			PMD0301ASA				1.16E-03	PMD0301ASA
25	3.59E-09	.75	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			PMD0301BSA				1.16E-03	PMD0301BSA
26	3.59E-09	.75	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			PMDMOD11				2.09E-03	PMDMOD11
27	3.09E-09	.64	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
28	2.75E-09	.57	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
29	2.75E-09	.57	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
30	2.45E-09	.51	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
31	2.19E-09	.46	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
32	2.12E-09	.44	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
33	1.99E-09	.41	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			PMD0301ASA				1.16E-03	PMD0301ASA

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CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
34	1.99E-09	.41	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			PMD0301BSA				1.16E-03	PMD0301BSA
35	1.99E-09	.41	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			PMD0301ASA				1.16E-03	PMD0301ASA
36	1.99E-09	.41	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			PMD0301BSA				1.16E-03	PMD0301BSA
37	1.96E-09	.41	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			PMDMOD41				6.35E-04	PMDMOD41
38	1.96E-09	.41	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			COMMON CAUSE	FAILURE OF THE	INVERTER		2.40E-05	CCX-IV-XR
39	1.83E-09	.38	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			IWN-MAN00C				5.00E-02	IWN-MAN00C
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
40	1.78E-09	.37	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
41	1.72E-09	.36	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
42	1.72E-09	.36	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
43	1.69E-09	.35	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
44	1.60E-09	.33	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDDMOD33
45	1.60E-09	.33	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			PMDMOD11				2.09E-03	PMDMOD11
46	1.58E-09	.33	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
47	1.22E-09	.25	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
48	1.09E-09	.23	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			PMDMOD41				6.35E-04	PMDMOD41

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Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
49	1.09E-09	.23	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			PMDMOD41				6.35E-04	PMDMOD41
50	1.07E-09	.22	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			MECHANICAL	FAILURE CAUSES	MOV 121A TO	FAIL-TO-OPEN	3.00E-03	IRWMOD5S
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
51	1.04E-09	.22	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		4.07E-03	PMAMOD21
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
52	1.04E-09	.22	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
53	9.81E-10	.20	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
54	9.81E-10	.20	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			PMDMOD11				2.09E-03	PMDMOD11
55	9.81E-10	.20	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			LOSS OF DIST.	PANEL OR BREAKER	A28 SPURIOUSLY	OPENS	3.17E-04	IDDMOD32
56	9.78E-10	.20	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
57	9.28E-10	.19	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			PMDMOD11				2.09E-03	PMDMOD11
58	9.28E-10	.19	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
59	9.28E-10	.19	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDD1TM
60	9.28E-10	.19	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDK1TM
61	8.86E-10	.18	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			PMD0301BSA				1.16E-03	PMD0301BSA
62	8.86E-10	.18	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDDMOD33

Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME			EVENT PROB	IDENTIFIER
63	8.86E-10	.18	LOSS OF OFFSITE FAILURE UPON DEMAND OF LOGIC, FAILURE OF INV.. STATIC SWITCH	POWER INITIATING EVENT OCCURS GROUP PROCESSING AND ASSOC.	WITH RCS DRAINED BREAKERS	1.48E-03 1.16E-03 5.16E-04	IEV-LOSPD PMS0301RSA IDRM0D33
64	8.86E-10	.18	LOSS OF OFFSITE FAILURE OF INV.. STATIC SWITCH PMS0301ASA	POWER INITIATING EVENT OCCURS STATIC SWITCH AND ASSOC.	WITH RCS DRAINED BREAKERS	1.48E-03 5.16E-04 1.16E-03	IEV-LOSPD IDAM0D05 PMS0301ASA
65	8.69E-10	.18	LOSS OF CCS/SWS FAILURE OF MECHANICAL	WITH RCS DRAINED INITIATING EVENT OCCURS PMS OUTPUT LOGIC I/Os FAILURE CAUSES MOV 023 TO	FAIL-TO-OPEN	6.02E-04 6.53E-04 2.21E-03	IEV-COND PMAM0D11X RNS3M0D5S
66	8.22E-10	.17	LOSS OF CCS/SWS FAILURE OF PMSM0D11	WITH RCS DRAINED INITIATING EVENT OCCURS PMS OUTPUT LOGIC I/Os		6.02E-04 6.53E-04 2.09E-03	IEV-COND PMAM0D11X PMSM0D11
67	7.90E-10	.16	LOCA/RNS-V024 COMMON CAUSE	OPENS IN ..ING EVENT OCCURS FAILURF ...RE BATTERIES	WITH RCS FILLED IDSA-DB-1A/1B	1.58E-05 4.70E-05	IEV-LOCALGND CCX-BY-PN
68	7.64E-10	.16	LOSS OF OFFSITE FAILURE OF INV.. INDICATION	POWER INITIATING EVENT OCCURS STATIC SWITCH AND ASSOC. FAILURE	WITH RCS DRAINED BREAKERS	1.48E-03 5.16E-04 1.00E-03	IEV-LOSPD IDAM0D05 ALL-IND-FAIL
69	7.51E-10	.16	LOSS OF OFFSITE LOSS OF DIST OPERATOR FAILS	POWER INITIATING EVENT OCCURS PANEL OR BREAKER A07 SPURIOUSLY TO RECOGNIZE NEED AND TO OPEN	WITH RCS DRAINED OPENS RNS MOV V023	1.48E-03 3.17E-04 1.60E-03	IEV-LOSPD IDAM0D04 RNN-MAN05
70	7.42E-10	.15	LOSS OF OFFSITE FAILURE OF IRWST DISCHARGE	POWER INITIATING EVENT OCCURS PMS OUTPUT LINE "B" LOGIC I/Os	WITH RCS DRAINED STRAINER PLUGGED	1.48E-03 2.09E-03 2.40E-04	IEV-LOSPD PMSM0D11 IWR-PLUG
71	7.24E-10	.15	OVERDRAINING OF RHN-MAN04-5?CC OPERATOR FAILS COND PROB. OF	RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT TO OPEN TWO IRWST MOVs RHN-MAN05 (OP FAILS TO OPEN	RNS MOV V023)	4.44E-06 9.45E-01 1.15E-02 1.50E-01	IEV-RCSGD RHN-MAN04-5?CC IWR-MAN03 RHN-MAN05C
72	7.22E-10	.15	LOSS OF CCS/SWS SOFTWARE CCF	WITH RCS DRAINED INITIATING EVENT OCCURS OF ALL CARDS		6.02E-04 1.20E-06	IEV-COND CCX-SFTW
73	7.19E-10	.15	LOSS OF OFFSITE RNS UNAVAILABLE OPERATOR FAILS	POWER INITIATING EVENT OCCURS DUE TO TEST OR CORRECTIVE TO RECOGNIZE NEED AND TO OPN	WITH RCS DRAINED MAINTENANCE RNS MOV V023	1.48E-03 3.00E-04 1.60E-,	IEV-LOSPD IDRASED37M RHN-MAN05
74	7.03E-10	.15	LOSS OF RNS WITH CCF OF THE POWER	RCS DRAINED INITIATING EVENT OCCURS INTERFACE OUTPUT BOARDS IN PMS		8.15E-05 8.62E-06	IEV-RNSD CCF-EP-SAM
75	6.98E-10	.15	LOSS OF CCS/SWS PMAM0D21X INDICATION	WITH RCS DRAINED INITIATING EVENT OCCURS FAILURE		6.02E-04 1.16E-03 1.00E-03	IEV-COND PMAM0D21X ALL-IND-FAIL
76	6.86E-10	.14	LOSS OF CCS/SWS FAILURE OF INV.. MECHANICAL	WITH RCS DRAINED INITIATING EVENT OCCURS STATIC SWITCH AND ASSOC. FAILURE CAUSES MOV 023 TO	BREAKERS FAIL-TO-OPEN	6.02E-04 5.16E-04 2.21E-03	IEV-COND IDAM0D05 RNS3M0D5S
77	6.49E-10	.14	LOSS OF CCS/SWS FAILURE OF INV.. STATIC SWITCH PMSM0D11	WITH RCS DRAINED INITIATING EVENT OCCURS AND ASSOC.	BREAKERS	6.02E-04 5.16E-04 2.09E-03	IEV-COND IDAM0D05 PMSM0D11

Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME			EVENT PROB	IDENTIFIER
78	6.29E-10	.13	LOSS OF CCS/SWS FAILURE OF OPR ISOR FAILS	WITH RCS DRAINED PMS OUTPUT TO RECOGNIZE	INITIATING EVENT OCCURS LOGIC I/Os NEED AND TO OPEN PMS MOV V023	6.02E-04 6.53E-04 1.60E-03	IEV-CCWD PMAMD011X PSN-MOR05
79	5.44E-10	.11	LOSS OF OFFSITE LOSS OF DIST. PMD0301BSA	POWER INITIATING PANEL OR BREAKER A07	EVENT OCCURS SPURIOUSLY WITH RCS DRAINED OPENS	1.4E-03 3.17E-04 1.16E-03	IEV-LOSPD IDAMOD04 PMD0301BSA
80	5.44E-10	.11	LOSS OF OFFSITE LOSS OF DIST. PMD0301ASA	POWER INITIATING PANEL OR BREAKER A07	EVENT OCCURS SPURIOUSLY WITH RCS DRAINED OPENS	1.4E-03 3.17E-04 1.16E-03	IEV-LOSPD IDAMOD04 PMD0301ASA
81	5.44E-10	.11	LOSS OF OFFSITE FAILURE UPON LOSS OF DIST.	POWER INITIATING DEMAND OF LOGIC PANEL OR BREAKER A28	EVENT OCCURS GROUP PROCESSING SPURIOUSLY OF ANS	1.4E-03 1.16E-03 3.17E-04	IEV-LOSPD PMA0301BSA IDDMOD32
82	5.44E-10	.11	LOSS OF OFFSITE FAILURE UPON LOSS OF DIST.	POWER INITIATING DEMAND OF LOGIC PANEL OR BREAKER A28	EVENT OCCURS GROUP PROCESSING SPURIOUSLY OPENS	1.4E-03 1.16E-03 3.17E-04	IEV-LOSPD PMA0301ASA IDDMOD32
83	5.31E-10	.11	LOCA/PMS-V024 COMMON CAUSE	OPENS INITIATING FAILURE OF THE	EVENT OCCURS BATTERIES WITH RCS DRAINED IDSA-DB-1A/1B	1.13E-05 4.70E-05	IEV-LOCA24D CCX-BY-PN
84	5.29E-10	.11	LOSS OF OFFSITE FAILURE OF FAILURE OF	POWER INITIATING PMS OUTPUT OUTPUT DRIVER	EVENT OCCURS LOGIC I/Os WITH RCS DRAINED	1.4E-03 2.09E-03 1.71E-04	IEV-LOSPD PMAMD011 PSNDEP023GA
85	5.15E-10	.11	LOSS OF OFFSITE FAILURE UPON BUS UNAVAILABLE	POWER INITIATING DEMAND OF LOGIC DUE TO TEST OR	EVENT OCCURS GROUP PROCESSING CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 1.16E-03 3.00E-04	IEV-LOSPD PMA0301BSA IDBRSGS1TM
86	5.15E-10	.11	LOSS OF OFFSITE FAILURE UPON BUS UNAVAILABLE	POWER INITIATING DEMAND OF LOGIC DUE TO TEST OR	EVENT OCCURS GROUP PROCESSING CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 1.16E-03 3.00E-04	IEV-LOSPD PMA0301BSA IDBRSGS1TM
87	5.15E-10	.11	LOSS OF OFFSITE FAILURE UPON BUS UNAVAILABLE	POWER INITIATING DEMAND OF LOGIC DUE TO TEST OR	EVENT OCCURS GROUP PROCESSING CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 1.16E-03 3.00E-04	IEV-LOSPD PMA0301BSA IDBRSGS1TM
88	5.15E-10	.11	LOSS OF OFFSITE FAILURE UPON BUS UNAVAILABLE	POWER INITIATING DEMAND OF LOGIC DUE TO TEST OR	EVENT OCCURS GROUP PROCESSING CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 1.16E-03 3.00E-04	IEV-LOSPD PMA0301ASA IDBRSGS1TM
89	5.15E-10	.11	LOSS OF OFFSITE FAILURE UPON BUS UNAVAILABLE	POWER INITIATING DEMAND OF LOGIC DUE TO TEST OR	EVENT OCCURS GROUP PROCESSING CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 1.16E-03 3.00E-04	IEV-LOSPD PMA0301ASA IDBRSGS1TM
90	5.15E-10	.11	LOSS OF OFFSITE FAILURE UPON BUS UNAVAILABLE	POWER INITIATING DEMAND OF LOGIC DUE TO TEST OR	EVENT OCCURS GROUP PROCESSING CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 1.16E-03 3.00E-04	IEV-LOSPD PMA0301ASA IDBRSGS1TM
91	5.15E-10	.11	LOSS OF OFFSITE BUS UNAVAILABLE PMD0301BSA	POWER INITIATING DUE TO TEST OR	EVENT OCCURS CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 3.00E-04 1.16E-03	IEV-LOSPD IDABSGS1TM PMD0301BSA
92	5.15E-10	.11	LOSS OF OFFSITE BUS UNAVAILABLE PMD0301ASA	POWER INITIATING DUE TO TEST OR	EVENT OCCURS CORRECTIVE WITH RCS DRAINED MAINTENANCE	1.4E-03 3.00E-04 1.16E-03	IEV-LOSPD IDABSGS1TM PMD0301ASA

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
93	5.04E-10	.10	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
94	4.97E-10	.10	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MANOS
95	4.85E-10	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			PMDMOD41				6.35E-04	PMDMOD41
96	4.69E-10	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
97	4.56E-10	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			PMD0301ASA				1.16E-03	PMD0301ASA
98	4.56E-10	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			PMD0301BSA				1.16E-03	PMD0301BSA
99	4.44E-10	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDSITM
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
100	4.33E-10	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			MECHANICAL	FAILURE CAUSES	MOV 121A TO	FAIL-TO-OPEN	3.00E-03	IRWMMOD05S
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
101	4.22E-10	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
102	4.12E-10	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
103	4.12E-10	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	2WB-PLUG
104	4.03E-10	.08	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			COMMON CAUSE	FAILURE OF THE	INVERTER		2.40E-05	CCX-IV-XR
105	3.99E-10	.08	LOSS OF CCS/SWS	WITH RCS DRAINED	INIT. ING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDSITM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
106	3.99E-10	.08	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			PMDMOD11				2.09E-03	PMDMOD11
107	3.94E-10	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDDMOD33

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Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
108	3.93E-10	.08	3 OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
109	3.77E-10	.08	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			PMDMOD11				2.09E-03	PMDMOD11
110	3.60E-10	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			PMD0301BSA				1.16E-03	PMD0301BSA
111	3.60E-10	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			PMD0301ASA				1.16E-03	PMD0301ASA
112	3.39E-10	.07	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
113	3.11E-10	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
114	3.05E-10	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
115	2.98E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			PMDMOD41				6.35E-04	PMDMOD41
116	2.96E-10	.06	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
117	2.94E-10	.06	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			2.60E-05	IWX-MV-GO1
118	2.94E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			FAILURE OF	OUTPUT DRIVER			1.71E-04	RNDEP023SA
119	2.94E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			FAILURE OF	OUTPUT DRIVER			1.71E-04	RNDEP023SA
120	2.89E-10	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
121	2.82E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			PMDMOD41				6.35E-04	PMDMOD41
122	2.71E-10	.06	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IRV-LOCA24D
			COMMON CAUSE	FAILURE OF THE	INVERTER		2.40E-05	CCX-IV-XR

Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
123	2.62E-10	.05	LOSS OF OFFSITE	POWER INITIA NG	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS00ASA
			MECHANICAL	FAILURE CAUS 3	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
124	2.50E-10	.05	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			PMDMOD41				6.35E-04	PMDMOD41
125	2.47E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS00ASA
			PMDMOD11				2.09E-03	PMDMOD11
126	2.47E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			PMDXS00ASA				8.00E-05	PMDXS00ASA
127	2.44E-10	.05	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSGD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MANO4
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
128	2.42E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			LOSS OF DIST.	PANEL OR BREAKER	A28 SPURIOUSLY	OPENS	3.17E-04	IDDMOD32
129	2.42E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	_.17E-04	IDAMOD04
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDDMOD33
130	2.29E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDDMOD33
131	2.29E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDK1TM
132	2.29E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
133	2.29E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDD1TM
134	2.21E-10	.05	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			PMD0301ASA				1.16E-03	PMD0301ASA
135	2.21E-10	.05	LOSS OF CCT/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			PMD0301BSA				1.16E-03	PMD0301BSA
136	2.20E-10	.05	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPF	2.21E-03	RN23MOD5S

Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
137	2.20E-10	.05	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BSAX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S
138	2.14E-10	.04	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
139	2.09E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			PMD0301ASA				1.16E-03	PMD0301ASA
140	2.09E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			PMD0301BSA				1.16E-03	PMD0301BSA
141	2.08E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	3.17E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BSAX
			PMDMOD11				2.09E-03	PMDMOD11
142	2.08E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			PMDMOD11				2.09E-03	PMDMOD11
143	2.03E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			FAILURE OF INV., STATIC SWITCH	AND ASSOC.	BREAKERS		5.16E-04	IDDMOD33
144	2.02E-10	.04	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
145	1.97E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV., STATIC SWITCH	AND ASSOC.	BREAKERS		5.16E-04	IDAMOD05
			PMDMOD41				6.35E-04	PMDMOD41
146	1.97E-10	.04	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-BN
147	1.91E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER A07	SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
148	1.89E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXSGOASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
149	1.83E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV., STATIC SWITCH	AND ASSOC.	BREAKERS		5.16E-04	IDAMOD05
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
150	1.81E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
151	1.60E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV., STATIC SWITCH	AND ASSOC.	BREAKERS		5.16E-04	IDAMOD05
			FAILURE OF INV., STATIC SWITCH	AND ASSOC.	BREAKERS		5.16E-04	IDDMOD33

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
152	1.59E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05
153	1.59E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BSAX
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		1.60E-03	RHN-MAN05
154	1.52E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			COMMON MODE	FAILURE OF INPUT LOGIC GROUPS			1.03E-04	CCX-INPUT-LOGIC
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
155	1.49E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			LOSS OF DIST.	PANEL OR BREAKER A28 SPURIOUSLY	OPENS		3.17E-04	IDDMOD32
156	1.45E-10	.03	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF THE POWER	INTERFACE OUTPUT BOARDS IN PMS			8.62E-06	CCX-EP-SAM
157	1.41E-10	.0	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			LOSS OF DIST.	PANEL OR BREAKER A28 SPURIOUSLY	OPENS		3.17E-04	IDDMOD32
158	1.41E-10	.03	LOSS OF OFFSITE	POWER INITIATING EV. JCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDJBSDK1TM
159	1.41E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
160	1.41E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDD1TM
161	1.40E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW1OR170SPK
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
162	1.40E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPK
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
163	1.37E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			PMDXS00ASA				8.00E-05	PMDXS00ASA
164	1.37E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			PMDXS00ASA				8.00E-05	PMDXS00ASA
165	1.37E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS00ASA
			PMD0301BSA				1.16E-03	PMDG0301BSA
166	1.37E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS00ASA
			PMD0301ASA				1.16E-03	PMD0301ASA

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
167	1.36E-10	.03	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS DRAINED	..13E-05	IEV-LOCA24D
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
168	1.33E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDK1TM
169	1.33E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
170	1.33E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDD1TM
171	1.31E-10	.03	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			FAILURE OF	OUTPUT DRIVER			1.71E-04	PMDEP023SA
172	1.26E-10	.03	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT			4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.00E-05	P.JX-EV-SA
173	1.25E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			LOSS OF DIST.	PANEL OR BREAKER A28 SPURIOUSLY	OPENS		3.17E-04	IDDMOD32
174	1.21E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			...MOD41				6.35E-04	PMDMOD41
175	1.20E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			PM MOD21X				1.16E-03	PMAMOD21X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			CUID. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
176	1.18E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS00ASA
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL
177	1.18E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
178	1.18E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDD1TM
179	1.18E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDK1TM
180	1.18E-10	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MOD5S

Table 54B-5

CASE 2 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
181	1.15E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BSAX
			PMD0301ASA				1.16E-03	PMD0301ASA
182	1.15E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BSAX
			PMD0301BSA				1.16E-03	PMD0301BSA
183	1.15E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			PMD0301ASA				1.16E-03	PMD0301ASA
184	1.15E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			PMD0301BSA				1.16E-03	PMD0301BSA
185	1.15E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			PMDMOD41				6.35E-04	PMDMOD41
186	1.13E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
187	1.11E-10	.02	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			PMDMOD11				2.09E-03	PMDMOD11
188	1.09E-10	.02	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT			4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023				2.60E-05	IWX-MV-G01
189	1.07E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
190	1.07E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDBBSDS1TM
191	1.07E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDBBSDD1TM
192	1.07E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDBBSDR1TM
193	1.06E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS0OASAX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RI"23MOD5S
194	1.01E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	1.48E-03	IEV-LOSPD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			INDICATION	FAILURE			1.00E-03	ALL-IND-FAIL

Table 54B-6

BASIC EVENT IMPORTANCE - CASE 2

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SYSTEM UNAVAILABILITY (Q)  =   4.806E-07
NUMBER OF BASIC EVENTS     =   156
NUMBER OF CUTSETS          =   6982
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BASIC EVENT	IMPORTANCE (%DECREASE)	NUMBER OF CUTSETS	DECREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1 IEV-LOSPD	71.02	2488	3.4131E-07	1.4800E-03
2 IEV-CCWD	23.25	1723	1.1174E-07	6.0200E-04
3 CCX-BY-PN	21.50	33	1.0334E-07	4.7000E-05
4 ADX-EV-SA	13.62	357	6.5440E-08	3.0000E-05
5 IWX-MV-GO1	11.80	6	5.6729E-08	2.6000E-05
6 CCX-IV-XR	10.96	31	5.2681E-08	2.4000E-05
7 PMAMOD11	7.80	32	3.7505E-08	2.0900E-03
8 IWX-FL-GP	5.50	30	2.6409E-08	1.2000E-03
9 ALL-IND-FAIL	4.62	485	2.2208E-08	1.0000E-03
10 RN23MOD5S	4.60	560	2.2100E-08	2.2100E-03
11 PMDMOD11	4.35	560	2.0901E-08	2.0900E-03
12 PMA0301ASA	4.33	29	2.0817E-08	1.1600E-03
13 PMA0301BSA	4.33	29	2.0817E-08	1.1600E-03
14 CCX-EP-SAM	3.95	29	1.8988E-08	8.6200E-06
15 RHN-MAN05	3.32	465	1.5961E-08	1.6000E-03
16 IEV-RNSD	3.15	1020	1.5`32E-08	8.1500E-05
17 IDAMOD05	2.84	126	1.3635E-08	5.1600E-04
18 PMD0301ASA	2.41	475	1.1596E-08	1.1600E-03
19 PMD0301BSA	2.41	475	1.1596E-08	1.1600E-03
20 IDAMOD04	1.74	123	8.3789E-09	3.1700E-04
21 IEV-RCSOD	1.67	581	8.0065E-09	4.4400E-06
22 IDABSDS1TM	1.65	123	7.9242E-09	3.0000E-04
23 CCX-ORY-SPX	1.65	6	7.9131E-09	3.6300E-06
24 PMAMOD21	1.49	79	7.1743E-09	4.0700E-03
25 PMDMOD41	1.32	396	6.3453E-09	6.3500E-04
26 RHN-MAN04-SUCC	1.20	368	5.7646E-09	9.4500E-01
27 CCX-XMTRX	1.19	6	5.7253E-09	2.6300E-06
28 PMAMOD11X	1.15	100	5.5352E-09	6.5300E-04
29 IDDMOD33	1.07	379	5.1635E-09	5.1600E-04
30 IWB-PLUG	1.00	231	4.7847E-09	2.4000E-04
31 RHN-MAN05C	.81	28	3.8885E-09	1.5000E-01
32 IDDMOD32	.66	321	3.1706E-09	3.1700E-04
33 IDDBSDS1TM	.62	322	2.9997E-09	3.0000E-04
34 IDDBSDD1TM	.62	313	2.9996E-09	3.0000E-04
35 IDDBSDK1TM	.62	313	2.9996E-09	3.0000E-04
36 CCX-SFTW	.55	24	2.6409E-09	1.2000E-06
37 RHN-MAN04	.49	335	2.3454E-09	9.5000E-02
38 IWN-MAN00	.46	366	2.1893E-09	1.1500E-03
39 IEV-LOCA24D	.44	465	2.0966E-09	1.1300E-05
40 IEV-LOCA24ND	.44	178	2.0950E-09	1.6800E-05
41 IWN-MAN00C	.40	20	1.9464E-09	5.0000E-02
42 RNDEP023SA	.36	281	1.7109E-09	1.7100E-04
43 IRWMOD05S	.35	758	1.6747E-09	3.0000E-03
44 PMAXS00ASA	.30	25	1.4338E-09	8.0000E-05
45 PMA0301ASAX	.29	97	1.3986E-09	1.6500E-04
46 PMA0301BSAX	.29	97	1.3986E-09	1.6500E-04
47 IWX-CV-AO	.28	149	1.3468E-09	3.0000E-05
48 PMAMOD21X	.20	141	9.5942E-10	1.1600E-03
49 PMDXS00ASA	.17	189	7.9861E-10	8.0000E-05
50 PMAXS00ASAX	.14	97	6.7789E-10	8.0000E-05
51 ADN-MAN01	.10	61	4.7514E-10	4.9300E-04
52 CCX-INPUT-LOGIC	.08	78	3.7004E-10	1.0300E-04
53 IW1OR170SPX	.07	132	3.4896E-10	9.4600E-05
54 IW2OR160SPX	.07	132	3.4896E-10	9.4600E-05
55 IW1TL170UFX	.05	124	2.5213E-10	6.8400E-05
56 IW2TL160UFX	.05	124	2.5213E-10	6.8400E-05
57 IDAMOD02	.04	99	1.9251E-10	2.7000E-03
58 IDAMOD03	.04	99	1.9251E-10	2.7000E-03
59 IDBBSDS1TM	.03	410	1.6752E-10	3.0000E-04
60 IDBBSDD1TM	.03	411	1.6735E-10	3.0000E-04
61 IDBBSDK1TM	.03	411	1.6735E-10	3.0000E-04
62 IWA-PLUG	.03	409	1.3592E-10	2.4000E-04
63 IDABSDS1LF	.03	98	1.2676E-10	4.8000E-06
64 IDDFD019RQ	.02	99	1.1991E-10	1.2000E-05
65 IDDFD020RQ	.02	99	1.1991E-10	1.2000E-05
66 IEV-LOCAPRND	.02	133	1.0356E-10	1.5100E-05

67	PXX-AV-LA	.02	218	9.7794E-11	6.1000E-05
68	IWACV122AO	.02	524	8.6846E-11	8.7600E-03
69	IWACV123AO	.02	524	8.6846E-11	8.7600E-03
70	IWACV124AO	.02	524	8.6846E-11	8.7600E-03
71	IWACV125AO	.02	524	8.6846E-11	8.7600E-03
72	PKAMOD41	.02	342	8.6000E-11	6.3500E-04
73	IDDMOD22	.02	76	7.2763E-11	2.7000E-03
74	IDDMOD23	.02	76	7.2763E-11	2.7000E-03
75	IEV-LOSPND	.01	185	6.6901E-11	8.1300E-03
76	IDDBSDD1LF	.01	68	4.7908E-11	4.8000E-06
77	IDDBSDK1LF	.01	68	4.7908E-11	4.8000E-06
78	IDDBSDS1LF	.01	68	4.7908E-11	4.8000E-06
79	CCX-IN-LOGIC-SW	.01	80	4.0856E-11	1.1000E-05
80	IDCBSDS1TM	.01	532	3.5232E-11	3.0000E-04
81	IDCBSDD1TM	.01	529	3.5198E-11	3.0000E-04
82	IDCBSDK1TM	.01	529	3.5198E-11	3.0000E-04
83	IRAEP121ASAX	.01	218	3.2327E-11	5.8300E-05
84	IEV-CCWND	.01	125	3.0895E-11	3.7500E-03
85	CCX-EP-SAMX	.01	73	2.4896E-11	2.9400E-06
86	CCX-INPUT-LOGICX	.00	47	2.1376E-11	2.5900E-05
87	IWBCV122AO	.00	704	1.9302E-11	8.7600E-03
88	IWBCV123AO	.00	704	1.9302E-11	8.7600E-03
89	IWBCV124AO	.00	704	1.9302E-11	8.7600E-03
90	IWBCV125AO	.00	704	1.9302E-11	8.7600E-03
91	IEV-RNSND	.00	84	7.9011E-12	9.6100E-04
92	IRAEP121BSAX	.00	304	6.7177E-12	5.8300E-05
93	IDBFD013RQ	.00	92	6.5755E-12	1.2000E-05
94	IDBFD014RQ	.00	92	6.5755E-12	1.2000E-05
95	PMAEHOA1SA	.00	93	5.9349E-12	8.0000E-05
96	CCX-LS-FA	.00	67	5.6773E-12	5.3700E-06
97	ADN-MAN01C	.00	6	5.3839E-12	5.0000E-02
98	AD3MOD03	.00	79	5.2154E-12	5.5400E-02
99	AD3MOD04	.00	79	5.2154E-12	5.5400E-02
100	AD2MOD01	.00	76	5.2064E-12	5.5400E-02
101	AD2MOD02	.00	75	5.2062E-12	5.5400E-02
102	PMAEHOA1SAX	.00	105	4.8270E-12	8.0000E-05
103	IDBMOD10	.00	63	3.9737E-12	2.7000E-03
104	IDBMOD11	.00	63	3.9737E-12	2.7000E-03
105	IWNTK001AF	.00	58	3.8181E-12	2.4000E-06
106	LPM-MAN05	.00	33	3.3402E-12	6.8300E-04
107	PRAAV108LA	.00	66	2.7486E-12	1.0900E-03
108	PRBAV108LA	.00	66	2.7486E-12	1.0900E-03
109	IDBBSDS1LF	.00	44	2.5945E-12	4.8000E-06
110	IDBBSDD1LF	.00	43	2.5920E-12	4.8000E-06
111	IDBBSDK1LF	.00	43	2.5920E-12	4.8000E-06
112	CCX-AV-LA	.00	16	2.4406E-12	6.1000E-05
113	CMX-CV-GO	.00	15	2.0431E-12	5.1000E-05
114	CMX-VS-FA	.00	19	1.6807E-12	3.8400E-05
115	IDCFD007RQ	.00	141	1.2889E-12	1.2000E-05
116	IDCFD008RQ	.00	141	1.2889E-12	1.2000E-05
117	PMAMOD31	.00	58	1.2558E-12	5.0200E-03
118	PRAAV108TM	.00	42	1.2552E-12	5.0000E-04
119	PRBAV108TM	.00	42	1.2552E-12	5.0000E-04
120	PMBMOD32	.00	49	1.1652E-12	5.0200E-03
121	PMCMOD33	.00	49	1.1652E-12	5.0200E-03
122	PMBMOD11	.00	11	1.1545E-12	2.0900E-03
123	PMDMOD34	.00	34	1.0091E-12	5.0200E-03
124	IDCMOD16	.00	102	7.4885E-13	2.7000E-03
125	IDCMOD17	.00	102	7.4885E-13	2.7000E-03
126	PMB0301ASA	.00	8	6.4249E-13	1.1600E-03
127	PMB0301BSA	.00	8	6.4249E-13	1.1600E-03
128	ADX-MV-GO	.00	8	6.0862E-13	1.1000E-03
129	IDCBSDD1LF	.00	80	4.7107E-13	4.8000E-06
130	IDCBSDK1LF	.00	80	4.7107E-13	4.8000E-06
131	IDCBSDS1LF	.00	80	4.7107E-13	4.8000E-06
132	IDBMOD25	.00	15	3.5538E-13	5.1600E-04
133	IDBMOD24	.00	8	2.1072E-13	3.1700E-04
134	PRX-HR-ML	.00	15	1.8774E-13	1.2000E-07
135	CCX-XMTR	.00	4	1.4200E-13	2.0100E-04
136	IDCMOD29	.00	9	7.0055E-14	5.1600E-04
137	PMBXS00ASA	.00	4	4.4076E-14	8.0000E-05
138	IDCMOD28	.00	3	3.5305E-14	3.1700E-04
139	IDABSDD1TM	.00	9	2.6978E-14	3.0000E-04
140	IDABSDK1TM	.00	9	2.6978E-14	3.0000E-04
141	CMA-PLUG	.00	3	1.9318E-14	7.2700E-04
142	CMB-PLUG	.00	3	1.9318E-14	7.2700E-04
143	ADAEP002ASA	.00	6	1.4988E-14	1.7100E-04
144	ADAEP003ASA	.00	6	1.4988E-14	1.7100E-04
145	ADAEP012ASA	.00	6	1.4988E-14	1.7100E-04
146	ADAEP013ASA	.00	6	1.4988E-14	1.7100E-04
147	ADBEP002BSA	.00	6	1.4988E-14	1.7100E-04

148	ADBEP003BSA	.00	6	1.4988E-14	1.7100E-04
149	ADBEP012BSA	.00	6	1.4988E-14	1.7100E-04
150	ADBEP013BSA	.00	6	1.4988E-14	1.7100E-04
151	IWX-XMTRLW	.00	6	1.0436E-14	9.2000E-09
152	PMBMOD21	.00	4	5.7732E-15	4.0700E-03
153	CMX-TK-AF	.00	2	3.3307E-15	1.2000E-07
154	PMBMOD41	.0C	1	1.3323E-15	6.3500E-04
155	IDAFD003RQ	.00	3	9.9920E-16	1.2000E-05
156	IDAFD004RQ	.00	3	9.9920E-16	1.2000E-05

SYSTEM UNAVAILABILITY (Q) =   4.806E-07
NUMBER OF BASIC EVENTS   =   156
NUMBER OF CUTSETS   =   6982

BASIC EVENT	IMPORTANCE (%INCREASE)	NUMBER OF CUTSETS	INCREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1 CCX-EP-SAM	458350.	29	2.2028E-03	8.6200E-06
2 CCX-SFTW	457931.	24	2.2008E-03	1.2000E-06
3 IWX-FL-OP	457927.	30	2.2008E-03	1.2000E-05
4 CCX-BY-PN	457476.	33	2.1986E-03	4.7000E-05
5 CCX-IV-XR	456728.	31	2.1950E-03	2.4000E-05
6 IWX-MV-GO1	453992.	6	2.1818E-03	2.6000E-05
7 ADX-EV-SA	453871.	357	2.1813E-03	3.0000E-05
8 CCX-ORY-SPX	453589.	6	2.1799E-03	3.6300E-06
9 CCX-XMTRX	452970.	6	2.1769E-03	2.6300E-06
10 IEV-RCSOD	375218.	581	1.8033E-03	4.4400E-06
11 IEV-LOSPD	47914.3	2488	2.3027E-04	1.4800E-03
12 IEV-RNSD	38629.8	1020	1.8565E-04	8.1500E-05
13 IEV-LOCA24D	38607.1	465	1.8554E-04	1.1300E-05
14 IEV-CCWD	38600.3	1723	1.8551E-04	6.0200E-04
15 IEV-LOCA24ND	25946.9	178	1.2470E-04	1.6800E-05
16 IWX-CV-AO	9341.02	149	4.4892E-05	3.0000E-05
17 IDAMOD04	5498.14	123	2.6424E-05	3.1700E-04
18 IDAMOD05	5495.58	126	2.6411E-05	5.1600E-04
19 IDABSDS1LF	5495.11	98	2.6409E-05	4.8000E-06
20 IDABSDS1TM	5494.50	123	2.6406E-05	3.0000E-04
21 ALL-IND-FAIL	4616.35	485	2.2186E-05	1.0000E-03
22 IWB-PLUG	4147.29	231	1.9931E-05	2.4000E-04
23 PMA0301ASA	3729.77	29	1.7925E-05	1.1600E-03
24 PMA0301BSA	3729.77	29	1.7925E-05	1.1600E-03
25 PMAXS00ASA	3729.02	25	1.7921E-05	8.0000E-05
26 PMAMOD11	3726.16	32	1.7908E-05	2.0900E-03
27 RNDEP023SA	2081.55	281	1.0004E-05	1.7100E-03
28 IDDMOD33	2081.10	379	1.0002E-05	5.1600E-04
29 IDDMOD32	2080.52	321	9.9988E-06	3.1700E-04
30 IDDBSDS1TM	2079.93.	322	9.9959E-06	3.0000E-04
31 IDDBSDD1TM	2079.86	313	9.9956E-06	3.0000E-04
32 IDDBSDK1TM	2079.86	313	9.9956E-06	3.0000E-04
33 IDDFD019RQ	2075.16	99	9.9922E-06	1.2000E-05
34 IDDFD020RQ	2079.16	99	9.9922E-06	1.2000E-05
35 PMDMOD41	2077.90	396	9.9862E-06	6.3500E-04
36 PMD0301ASA	2077.57	475	9.9846E-06	1.1600E-03
37 PMD0301BSA	2077.57	475	9.9846E-06	1.1600E-03
38 PMDXS00ASA	2076.99	189	9.9818E-06	8.0000E-05
39 IDDBSDD1LF	2076.77	68	9.9808E-06	4.8000E-06
40 IDDBSDK1LF	2076.77	68	9.9808E-06	4.8000E-06
41 IDDBSDS1LF	2076.77	68	9.9808E-06	4.8000E-06
42 PMDMOD11	2076.57	560	9.9798E-06	2.0900E-03
43 RN23MOD5S	2076.14	560	9.9777E-06	2.2100E-03
44 RHN-MAN05	2072.43	465	9.9599E-06	1.6000E-03
45 PMA0301ASAX	1763.42	97	8.4749E-06	1.6500E-04
46 PMA0301BSAX	1763.42	97	8.4749E-06	1.6500E-04
47 PMAXS00ASAX	1763.03	97	8.4729E-06	8.0000E-05
48 PMAMOD11X	1762.62	100	8.4710E-06	5.5300E-04
49 CCX-EP-SAMX	1761.97	73	8.4679E-06	2.9400E-06
50 IEV-LOCAPRND	1427.06	133	6.8583E-06	1.5100E-05
51 CCX-IN-LOGIC-SW	772.834	80	3.7142E-06	1.1000E-05
52 IW1OR170SPX	767.488	132	3.6885E-06	9.4600E-05
53 IW2OR160SPX	767.488	132	3.6885E-06	9.4600E-05
54 IW1TL170UFX	766.937	124	3.6858E-06	6.8400E-05
55 IW2TL160UFX	766.937	124	3.6858E-06	6.8400E-05
56 CCX-INPUT-LOGIC	747.474	78	3.5923E-06	1.0300E-04
57 IWN-MAN00	395.672	366	1.9016E-06	1.1500E-03
58 PMAMOD21	365.290	79	1.7555E-06	4.0700E-03
59 PXX-AV-LA	333.566	218	1.6031E-06	6.1000E-05
60 IWNTK001AF	331.020	58	1.5909E-06	2.4000E-06
61 PRX-HR-ML	325.535	15	1.5645E-06	1.2000E-07
62 IWX-XMTRLW	236.034	6	1.1344E-06	9.2000E-09
63 CCX-LS-FA	219.985	67	1.0572E-06	5.3700E-06
64 ADN-MAN01	200.441	61	9.6330E-07	4.9300E-04
65 PMAMOD21X	171.898	141	8.2613E-07	1.1600E-03
66 CCX-INPUT-LOGICX	171.726	47	8.2530E-07	2.5900E-05
67 IWA-PLUG	117.811	409	5.6619E-07	2.4000E-04
68 IDBSDS1TM	116.158	410	5.5824E-07	3.0000E-04
69 IDBBSDD1TM	116.038	411	5.5767E-07	3.0000E-04
70 IDBBSDK1TM	116.038	411	5.5767E-07	3.0000E-04
71 IRWMOD05S	115.810	756	5.5657E-07	3.0000E-03
72 IRAEP121ASAX	115.372	218	5.5447E-07	5.8300E-05

51

73	IDBFD013RQ	114.017	92	5.4795E-07	1.2000E-05
74	IDBFD014RQ	114.017	92	5.4795E-07	1.2000E-05
75	IDBBSDS1LF	112.469	44	5.4051E-07	4.8000E-06
76	IDBBSDD1LF	112.363	43	5.4001E-07	4.8000E-06
77	IDBBSDK1LF	112.363	43	5.4001E-07	4.8000E-06
78	PMAMOD41	28.1626	342	1.3535E-07	6.3500E-04
79	IDCBSDS1TM	24.4293	532	1.1740E-07	3.0000E-04
80	IDCBSDD1TM	24.4060	529	1.1729E-07	3.0000E-04
81	IDCBSDK1TM	24.4060	529	1.1729E-07	3.0000E-04
82	IRAEP121BSAX	23.9747	304	1.1522E-07	5.8300E-05
83	IDCFD007RQ	22.3482	141	1.0740E-07	1.2000E-05
84	IDCFD008RQ	22.3482	141	1.0740E-07	1.2000E-05
85	IDCBSDD1LF	20.4204	80	9.8139E-08	4.8000E-06
86	IDCBSDK1LF	20.4204	80	9.8139E-08	4.8000E-06
87	IDCBSDS1LF	20.4204	80	9.8139E-08	4.8000E-06
88	PMAEH0A1SA	15.4353	93	7.4181E-08	8.0000E-05
89	IDAMOD02	14.7958	99	7.1107E-08	2.7000E-03
90	IDAMOD03	14.7958	99	7.1107E-08	2.7000E-03
91	PMAFH0A1SAX	12.5539	105	6.0333E-08	8.0000E-05
92	CMY-.'S-FA	9.10658	19	4.3765E-08	3.8400E-05
93	RH.·.·.·N04	8.38500	335	4.0298E-08	5.5000E-02
94	CMX-CV-GO	8.33549	15	4.0060E-08	5.1000E-05
95	CCX-AV-LA	8.32464	16	4.0007E-08	6.1000E-05
96	IWN-MAN00C	7.69485	20	3.6981E-08	5.0000E-02
97	CMX-TK-AF	5.77530	2	2.7756E-08	1.2000E-07
98	IDDMOD22	5.59241	76	2.68·7E-08	2.7000E-03
99	IDDMOD23	5.59241	76	2.687·E-08	2.7000E-03
100	RHN-MAN05C	4.58492	28	2.2·5E-08	1.5000E-01
101	IWACV122AO	2.04478	524	9.·2·2-09	8.7600E-03
102	IWACV123AO	2.04478	524	9.·2·'E-09	8.7600E-03
103	IWACV124AO	2.04478	524	9.8270E-09	8.7600E-03
104	IWACV125AO	2.04478	524	9.8270E-09	8.7600E-03
105	IEV-RNSND	1.70912	84	8.2139E-09	9.6100E-04
106	IEV-CCWND	1.70784	125	8.2077E-09	3.7500E-03
107	IEV-LOSPND	1.69834	185	8.1620E-09	8.1300E-03
108	LPM-MAN05	1.01691	33	4.8872E-09	6.8300E-04
109	PRAAV108LA	.524122	66	2.5189E-09	1.0900E-03
110	PRBAV108LA	.524122	66	2.5189E-09	1.0900E-03
111	PRAAV108TM	.522103	42	2.5092E-09	5.0000E-04
112	PRBAV108TM	.522103	42	2.5092E-09	5.0000E-04
113	IWBCV122AO	.454469	704	2.1841E-09	8.7600E-03
114	IWBCV123AO	.454469	704	2.1841E-09	8.7600E-03
115	IWBCV124AO	.454469	704	2.1841E-09	8.7600E-03
116	IWBCV125AO	.454469	704	2.1841E-09	8.7600E-03
117	IDBMOD10	.305410	63	1.4678E-09	2.7000E-03
118	IDBMOD11	.305410	63	1.4678E-09	2.7000E-03
119	CCX-XMTR	.146968	4	7.0631E-10	2.0100E-04
120	IDBMOD25	.143234	15	6.8837E-10	5.1600E-04
121	IDBMOD24	.138272	8	6.6452E-10	3.1700E-04
122	PMB0301ASA	.115113	8	5.5322E-10	1.1600E-03
123	PMB0301BSA	.115113	8	5.5322E-10	1.1600E-03
124	ADX-MV-GO	.115001	8	5.5269E-10	1.1000E-03
125	PMBMOD11	.114702	11	5.5125E-10	2.0900E-03
126	PMBXS00ASA	.114631	4	5.5090E-10	8.0000E-05
127	RHN-MAN04-SUCC	6.981131E-02	368	3.3551E-10	9.4500E-01
128	IDCMOD16	5.755443E-02	102	2.7660E-10	2.7000E-03
129	IDCMOD17	5.755443E-02	102	2.7660E-10	2.7000E-03
130	PMAMOD31	5.179007E-02	58	2.4890E-10	5.0200E-03
131	PMBMOD32	4.805382E-02	49	2.3094E-10	5.0200E-03
132	PMCMOD33	4.805382E-02	49	2.3094E-10	5.0200E-03
133	PMDMOD34	4.161612E-02	34	2.0000E-10	5.0200E-03
134	IDCMOD29	2.823517E-02	9	1.3570E-10	5.1600E-04
135	IDCMOD28	2.316674E-02	3	1.1134E-10	3.1700E-04
136	ADN-MAN01C	2.128514E-02	6	1.0229E-10	5.0000E-02
137	IDABSDD1TM	1.870637E-02	9	8.9901E-11	3.0000E-04
138	IDABSDK1TM	1.870637E-02	9	8.9901E-11	3.0000E-04
139	AD3MOD03	1.850329E-02	79	8.8925E-11	5.5400E-02
140	AD3MOD04	1.850329E-02	79	8.8925E-11	5.5400E-02
141	AD2MOD01	1.847139E-02	76	8.8772E-11	5.5400E-02
142	AD2MOD02	1.847060E-02	75	8.8768E-11	5.5400E-02
143	ADAEP002ASA	1.823468E-02	6	8.7634E-11	1.7100E-04
144	ADAEP003ASA	1.823468E-02	6	8.7634E-11	1.7100E-04
145	ADAEP012ASA	1.823468E-02	6	8.7634E-11	1.7100E-04
146	ADAEP013ASA	1.823468E-02	6	8.7634E-11	1.7100E-04
147	ADBEP002BSA	1.823468E-02	6	8.7634E-11	1.7100E-04
148	ADBEP003BSA	1.823468E-02	6	8.7634E-11	1.7100E-04
149	ADBEP012BSA	1.823468E-02	6	8.7634E-11	1.7100E-04
150	ADBEP013BSA	1.823468E-02	6	8.7634E-11	1.7100E-04
151	IDAFD003RQ	1.732570E-02	3	8.3266E-11	1.2000E-05
152	IDAFD004RQ	1.732570E-02	3	8.3266E-11	1.2000E-05
153	CMA-PLUG	5.525019E-03	3	2.6553E-11	7.2700E-04

154	CMB-PLUG	5.525019E-03	3	2.6553E-11	7.2700E-04
155	PMBMOD41	4.362811E-04	1	2.0967E-12	6.3500E-04
156	PMBMOD21	2.939494E-04	4	1.4127E-12	4.0700E-03

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

Reduced Sum of Cutsets: 1.15E-06

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
1	1.81E-07	15.73	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
2	1.81E-07	15.73	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDK1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
3	1.81E-07	15.73	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDD1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
4	1.44E-07	12.51	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
5	3.51E-08	3.05	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			FAILURE OF POWER	INTERFACE OUTPUT	BOARD		5.83E-05	IRAEP121BSAX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
6	2.79E-08	2.42	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
7	2.45E-08	2.13	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDK1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
8	2.45E-08	2.13	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
9	2.45E-08	2.13	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDD1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
10	2.29E-08	1.99	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF IRWST INJ	MOVs 121A, 121B, & RNS V023			3.80E-05	IWX-MV-GO1
11	2.29E-08	1.99	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.80E-05	ADX-EV-SA

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
12	1.96E-08	1.70	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
13	1.87E-08	1.62	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.10E-05	IWX-CV-AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
14	1.22E-08	1.06	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			IWN-MAN00C				5.00E-02	IWN-MAN00C
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
15	8.58E-09	.75	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
16	8.31E-09	.72	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF LOGIC	GROUP PROCESSING			1.38E-05	CCX-PMA030X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
17	7.79E-09	.68	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
18	7.22E-09	.63	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
19	6.62E-09	.58	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.10E-05	CCX-PMAMOD1-SW
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
20	4.83E-09	.42	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
21	4.76E-09	.41	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
22	4.76E-09	.41	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

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Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
23	4.68E-09	.41	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
24	4.33E-09	.38	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301RSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
25	4.33E-09	.38	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	CTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
26	4.03E-09	.35	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
27	3.77E-09	.33	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
28	3.10E-09	.27	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		3.80E-05	IWX-MV-GO1
29	3.10E-09	.27	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.80E-05	ADX-EV-SA
30	3.09E-09	.27	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
31	2.85E-09	.25	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
32	2.71E-09	.24	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
33	2.60E-09	.23	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

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CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
34	2.60E-09	.23	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0201BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
35	2.53E-09	.22	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.10E-05	IWX-CV-AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
36	2.24E-09	.19	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
37	2.19E-09	.19	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
38	2.12E-09	.18	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
39	1.92E-09	.17	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-FU
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
40	1.92E-09	.17	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
41	1.84E-09	.16	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			CHECK VALVE	122B	FAILS TO OPEN		1.75E-03	IWBCV122AO
			CHECK VALVE	124B	FAILS TO OPEN		1.75E-03	IWBCV124AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
42	1.83E-09	.16	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			IWN-MAN00C				5.00E-02	IWN-MAN00C
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	1.50E-01	RHN-MAN05C
43	1.77E-09	.15	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		2.94E-06	CCX-EP-SAMX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
44	1.71E-09	.15	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
45	1.59E-09	.14	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	Z02MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
46	1.58E-09	.14	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
47	1.58E-09	.14	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
48	1.58E-09	.14	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
49	1.30E-09	.11	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.25E-03	ED1MOD03
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
50	1.24E-09	.11	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
51	1.24E-09	.11	LOSS OF OFFSITE	POWER INITIAT~.	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
52	1.23E-09	.11	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
53	1.20E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B PTC & RE PTC & CB ECS221 SPO		1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
54	1.18E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	Z0X-PD-ES
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
55	1.17E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
56	1.15E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
57	1.12E-09	.10	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF LOGIC	GROUP PROCESSING			1.38E-05	CCX-PMA030X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
58	1.12E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
59	1.09E-09	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
60	1.07E-09	.09	LOSS OF OFFSITE	POWER IMITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
61	1.07E-09	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
62	1.06E-09	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
63	1.06E-09	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
64	1.06F-09	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
65	1.01E-09	.09	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP	INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
66	9.86E-10	.09	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
67	9.78E-10	.08	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
68	9.68E-10	.08	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		{#3,5}	1.23E-02	EC1CB100VO
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
69	9.68E-10	.08	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			BREAKER 200	FAILS TO OPEN		{#5,3}	1.23E-02	EC2CB200VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
70	9.52E-10	.08	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
71	9.52E-10	.08	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
72	8.97E-10	.08	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.10E-05	CCX-PMAMOD1-SW
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
73	8.83E-10	.08	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
74	8.83E-10	.08	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
75	8.39E-10	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
76	8.39E-10	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
77	8.39E-10	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
78	8.19E-10	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
79	7.33E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B PTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
80	7.24E-10	.06	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		1.15E-03	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V(23)	1.50E-01	RHN-MAN05C
81	7.22E-10	.06	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
82	7.09E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
83	7.02E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
84	6.86E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.76E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
85	6.86E-10	.06	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME	EVENT PROB	IDENTIFIER
			FAILURE UPON DEMAND OF LOGIC GROUP PROCESSING	1.16E-03	PMA0301ASA
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
86	6.86E-10	.06	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			FIXED COMPONENTS FAILURE	3.17E-04	ED1MOD11
			FAILURE UPON DEMAND OF LOGIC GROUP PROCESSING	1.16E-03	PMA0301BSA
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
87	6.86E-10	.06	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			FIXED COMPONENTS FAILURE	3.17E-04	ED1MOD113
			FAILURE UPON DEMAND OF LOGIC GROUP PROCESSING	1.16E-03	PMA0301BSA
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
88	6.71E-10	.06	LOSS 2 OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			COMMON CAUSE FAILURE 4KV BREAKERS TO OPEN	1.20E-02	ECX-CB-GO
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
89	6.69E-10	.06	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			PUMP 01B FAILS & ST CK V007B & C B FTC & RE FTC & CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO START & RUN OR BKR 102 FAILS TO CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON DEMAND OF LOGIC GROUP PROCESSING	1.16E-03	PMA0301BSA
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
90	6.69E-10	.06	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			PUMP 01B FAILS & ST CK V007B & C B FTC & RE FTC & CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO START & RUN OR BKR 102 FAILS TO CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON DEMAND OF LOGIC GROUP PROCESSING	1.16E-03	PMA0301ASA
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
91	6.49E-10	.06	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			PUMP MP 01B SEGMENT HARDWARE FAILURE OR DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100 FAILS TO OPEN [#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON DEMAND OF LOGIC GROUP PROCESSING	1.16E-03	PMA0301ASA
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
92	6.49E-10	.06	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			PUMP MP 01B SEGMENT HARDWARE FAILURE OR DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100 FAILS TO OPEN [#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON DEMAND OF LOGIC GROUP PROCESSING	1.16E-03	PMA0301BSA
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
93	6.11E-10	.05	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE 122A FAILS TO OPEN	1.00E+00	IWACV122AO
			CHECK VALVE 124A FAILS TO OPEN	1.00E+00	IWACV124AO
			CHECK VALVE 122B FAILS TO OPEN	1.75E-03	IWBCV122AO
			CHECK VALVE 125B FAILS TO OPEN	5.80E-04	IWBCV125AO
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
94	6.11E-10	.05	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE 122A FAILS TO OPEN	1.00E+00	IWACV122AO
			CHECK VALVE 124A FAILS TO OPEN	1.00E+00	IWACV124AO

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
			CHECK VALVE	123B	FAILS TO OPEN		5.80E-04	IWBCV123AO
			CHECK VALVE	124B	FAILS TO OPEN		1.75E-03	IWBCV124AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+0.	RN23MOD5S
95	6.06E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
96	6.06E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
97	5.90E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
98	5.79E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
99	5.50E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PL5MOD11
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
100	5.37E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
101	5.37E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
102	5.37E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
103	5.37E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	Z02MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
104	5.26E-10	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
105	5.23E-10	.05	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-35	CCX-PMAMOD1X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
106	5.21E-10	.05	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.10E-05	IWX-CV-AO
107	5.15E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
108	5.15E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC18S121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
109	5.15E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
110	5.07E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO RUN OF	ENGINE-DRIVEN	FUEL PUMPS		1.30E-04	ZOX-PD-ER
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
111	4.99E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
112	4.88E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
113	4.88E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

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Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
114	4.88E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			UNAVAILABILITY	OF BUS 2CS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
115	4.74E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
116	4.54E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
117	4.54E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
118	4.32E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
119	4.29E-10	.04	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.90E-05	ADX-EV-SA
120	4.29E-10	.04	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF IRWST IKJ	MOVs 121A, 121B, & RNS V023			3.80E-05	IWX-MV-G01
121	4.23E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
122	4.08E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
123	4.07E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
124	4.07E-10	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			BREAKER 100	FAILS TO OPEN		(#3.5)	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA030`BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
125	3.98E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			CCF OF LOGIC	GROUP PROCESSING			9.69E-05	CCX-PMA030
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
126	3.93E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	Z02MOD01
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
127	3.78E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PL5MOD11
			CCF OF LOGIC	GROUP PROCESSING			9.69E-05	CCX-PMA030
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
128	3.75E-10	.03	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
129	3.75E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PL5MOD11
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			STANDBY DG	UNAVAILABLE DUE	TO TEST AND	MAINTENANCE	4.60E-02	Z01DG001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
130	3.61E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			CCF OF LOGIC	GROUP PROCESSING			9.69E-05	CCX-PMA030
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
131	3.59E-10	.03	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	6.83E-04	LPM-MAN05
132	3.50E-10	.03	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.10E-05	IWX-CV-AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
133	3.43E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			FAILURE OF	UNDERVOLTAGE	RELAY		4.36E-03	EC1REDG2GA
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
134	3.29E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS00ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
135	3.27E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
136	3.27E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
137	3.23E-10	.03	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SWA
138	3.16E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-02	ECX-CB-GO
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
139	3.05E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD11
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
140	3.05E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD113
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
141	3.05E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PL50301ASA
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
142	3.05E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PL50301BSA
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
143	2.98E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE OF	MIMIC BUS	SELECTOR BOARD		8.00E-05	PMAXS00ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
144	2.97E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B PTC & RE PTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
145	2.9?E-10	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
146	2.91E-10	.03	LOSS F OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILUR TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP M. ?1B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAIL TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			LOSS OF D.ST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
147	2.?9E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDS1TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
148	2.89E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.002+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDK1TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
149	2.89E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDD1TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	1.60E-03	RHN-MAN05
150	2.89E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
151	2.81E-10	.02	LOSS OF OFFS'TE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO RUN OF	ENGINE-DRIVEN	FUEL PUMPS		1.30E-04	ZOX-PD-ER
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
152	2.81E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO RUN OF	ENGINE-DRIVEN	FUEL PUMPS		1.30E-04	ZOX-PD-ER
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
153	2.77E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE OR DIVERTED FLOW			1.04E-02	CCBMOD01S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
154	2.77E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE OR DIVERTED FLOW			1.04E-02	CCBMOD01S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
155	2.76E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE FAILURE OR		DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
156	2.69E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZGX-DG-DS
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD5
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
157	2.68E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL MAINTENANCE		2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
158	2.68E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BSAX
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL MAINTENANCE		2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
159	2.68E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
160	2.68E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301ASAX
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
161	2.68E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BS...
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS01...M
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23M...5S
162	2.68E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS			6.02E-04	IEV-CCWD
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.65E-04	PMA0301BSAX
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
163	2.60E-10	.02	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.06E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	6.83E-04	LPM-MAN05
164	2.60E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
165	2.57E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD12X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
166	2.50E-10	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			CHECK VALVE	122B	FAILS TO OPEN		1.75E-03	IWBCV122AO
			CHECK VALVE	124B	FAILS TO OPEN		1.75E-03	IWBCV124AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
167	2.46E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
168	2.41E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	ZO2MOD01
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
169	2.40E-10	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		2.94E-06	CCX-EP-SAMX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
170	2.39E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
171	2.39E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	ZO2MOD01
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
172	2.34E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	DG ROOM VENT	FANS		6.00E-05	ZOX-BL-ES
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
173	2.28E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	Z02MOD01
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDAF-DS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
174	2.22E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE OF THE	BATTERY		5.70E-05	CCX-BY-PN1
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
175	2.17E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO OPEN		1.20E-03	BCX-CB-GO
			CCF OF LOGIC	GROUP PROCESSING			9.69E-05	CCX-PMA030
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
176	2.14E-10	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
177	2.13E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.70E-03	ED2MOD03
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
178	2.10E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PL50301BSA
			CCF OF LOGIC	GROUP PROCESSING			9.69E-05	CCX-PMA030
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
179	2.10E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PL50301ASA
			CCF OF LOGIC	GROUP PROCESSING			9.69E-05	CCX-PMA030
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
180	2.09E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE OF	UNDERVOLTAGE	RELAY		4.36E-03	EC1REIG2GA
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
181	2.09E-10	.02	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP	INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			CCF OF MUX	LOGIC GROUPS			4.98E-05	CCX-PMAMOD4
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
182	2.08E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PL5MOD11
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			STANDBY DG	UNAVAILABLE DUE	TO TEST AND	MAINTENANCE	4.60E-02	Z01DG001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
183	2.08E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FAILURE OF	PLS OUTPUT	LOGIC I/Os		2.09E-03	PLSMOD11
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			STANDBY DG	UNAVAILABLE DUE	TO TEST AND	MAINTENANCE	4.60E-02	ZO1DG001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
184	2.08E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PLS0301BSA
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			STANDBY DG	UNAVAILABLE DUE	TO TEST AND	MAINTENANCE	4.60E-02	ZO1DG001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
185	2.08E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PLS LOGIC GROUP	PROCESSING	FAILURE UPON	DEMAND	1.16E-03	PLS0301ASA
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			STANDBY DG	UNAVAILABLE DUE	TO TEST AND	MAI. ENANCE	4.60E-02	ZO1DG001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
186	2.03E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			CHECK VALVE	123B	FAILS TO OPEN		5.80E-04	IWBCV123AO
			CHECK VALVE	125B	FAILS TO OPEN		5.80E-04	IWBCV125AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
187	2.02E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF THE PUMPS			7.70E-04	RNX-PM-FS
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
188	2.02E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
189	2.02E-10	.02	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.58E-05	IEV-LOCA24ND
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
190	1.99E-10	.02	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.50E-02	RHN-MAN04
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
191	1.94E-10	.02	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				9.45E-01	RHN-MAN04-SUCC
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-7

CASE 3 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
192	1.93E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	D91	UNAVAILABLE		2.20E-03	ED1MOD03
			COMMON CAUSE	FAILURE OF THE	BATTERIES	IDSA-DB-1A/1B	4.70E-05	CCX-BY-PN
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
193	1.92E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			CCF OF OUTPUT	LOGIC I/O BOARDS			1.41E-04	CCX-PMAMOD1
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
194	1.91E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE OF	UNDERVOLTAGE	RELAY		4.36E-03	2C1REDG2GA
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
195	1.91E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE OF	UNDERVOLTAGE	RELAY		4.36E-03	EC1REDG2GA
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
196	1.87E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
197	1.87E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
198	1.83E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC & CB ECS221 SPO		1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS		3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
199	1.81E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC & CB ECS221 SPO		1.53E-02	RNBMOD07S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
200	1.81E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS FILLED	1.71E-02	IEV-LOSPND
			OFFSITE	AC POWER	RECOVERED IN	2 HOURS	7.60E-01	SUC-R2S
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		1.16E-02	REC-MANDAS

Table 54B-8

BASIC EVENT IMPORTANCE - CASE 3

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SYSTEM UNAVAILABILITY (Q. =    1.152E-06
NUMBER OF BASIC EVENTS     =    294
NUMBER OF CUTSETS          =    6454
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BASIC EVENT		IMPORTANCE (%DECREASE)	NUMBER OF CUTSETS	DECREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1	RN23MOD5S	77.53	875	8.9344E-07	1.0000E+00
2	IEV-CCWD	74.86	1942	8.6271E-07	6.0200E-04
3	IWACV122AO	72.04	126	8.3025E-07	1.0000E+00
4	IWACV124AO	72.04	126	8.3025E-07	1.0000E+00
5	IDCBSDD1TM	17.92	126	2.0654E-07	3.0000E-04
6	IDCBSDK1TM	17.92	126	2.0654E-07	3.0000E-04
7	IDCBSDS1TM	17.92	126	2.0654E-07	3.0000E-04
8	IWB-PLUG	15.02	382	1.7313E-07	2.4000E-04
9	IEV-LOSPD	12.39	2394	1.4283E-07	4.4400E-03
10	OTH-R1	12.06	2242	1.3893E-07	4.2000E-01
11	IEV-RNSD	9.72	933	1.1201E-07	8.1500E-05
12	PMAMOD11	4.04	296	4.6545E-08	2.0900E-03
13	IRAEP121BSAX	3.06	45	3.5245E-08	5.8300E-05
14	CCX-PMAMOD1X	2.83	195	3.2671E-08	4.6300E-05
15	ADX-EV-SA	2.46	290	2.8339E-08	3.8000E-05
16	IWX-MV-GO1	2.46	266	2.8329E-08	3.8000E-05
17	ED1MOD03	2.26	130	2.6060E-08	2.2020E-03
18	PMA0301ASA	2.19	218	2.5235E-08	1.1600E-03
19	PMA0301BSA	2.19	218	2.5235E-08	1.1600E-03
20	ZO1MOD01	2.13	518	2.4563E-08	2.0200E-02
21	IWX-CV-AO	2.05	395	2.3596E-08	3.1000E-05
22	ZOX-PD-ES	1.97	112	2.2736E-08	2.0000E-03
23	IEV-RCSOD	1.91	457	2.2001E-08	4.4400E-06
24	RHN-MAN04	1.25	122	1.4416E-08	5.5000E-02
25	IWN-MAN00C	1.22	23	1.4051E-08	5.0000E-02
26	EC1CB100VO	1.20	375	1.3871E-08	1.2300E-02
27	IDAMOD05	1.18	354	1.3652E-08	5.1600E-04
28	ECX-CB-GO	1.18	91	1.3624E-08	1.2000E-03
29	CCX-PMA030X	.84	130	9.6795E-09	1.3800E-05
30	SWBMOD02	.81	147	9.2930E-09	2.4400E-02
31	IWX-FL-GP	.79	168	9.1450E-09	1.2000E-05
32	IDAMOD04	.72	340	8.3399E-09	3.1700E-04
33	ECX-CB-GC	.72	73	8.2570E-09	7.3000E-04
34	ZO2MOD01	.70	181	8.0840E-09	2.0200E-02
35	CCX-PMAMOD1-SW	.68	128	7.8447E-09	1.1000E-05
36	RHN-MAN04-SUCC	.68	373	7.8249E-09	9.4500E-01
37	IDABSDS1TM	.66	255	7.6125E-09	3.0000E-04
38	CCX-SFTW	.59	26	6.7434E-09	1.2000E-06
39	IWN-MAN00	.52	189	5.9933E-09	1.1500E-03
40	RNBMOD07S	.52	141	5.9674E-09	1.5300E-02
41	IEV-LOCA24D	.45	393	5.2331E-09	1.1300E-05
42	ZOX-DG-DR	.43	56	4.9670E-09	4.4000E-04
43	CCX-PMAMOD1	.43	87	4.9407E-09	1.4100E-04
44	IEV-LOCA24ND	.42	121	4.8750E-09	1.6800E-05
45	EC2CB200VO	.41	139	4.6799E-09	1.2300E-02
46	PMAMOD11X	.38	369	4.3902E-09	6.5300E-04
47	EC1BS001TM	.38	442	4.3268E-09	2.7000E-03
48	EC1BS012TM	.38	442	4.3268E-09	2.7000E-03
49	EC1BS121TM	.38	442	4.3268E-09	2.7000E-03
50	SUC-R1S	.34	152	3.8968E-09	5.8000E-01
51	CCBMOD01S	.33	88	3.7503E-09	1.0400E-02
52	ED1MOD11	.31	54	3.5611E-09	3.1700E-04
53	ED1MOD113	.31	54	3.5612E-09	3.1700E-04
54	ZOX-DG-DS	.27	49	3.1630E-09	2.8000E-04
55	PL5MOD11	.27	72	3.1375E-09	2.0900E-03
56	CCX-PMA030	.27	59	3.1080E-09	9.6900E-05
57	ZO1DG001TM	.25	95	2.9170E-09	4.6000E-02
58	IWBCV122AO	.25	132	2.8672E-09	1.7500E-03
59	IWBCV124AO	.25	132	2.8672E-09	1.7500E-03
60	CCX-ORY-SPX	.23	112	2.7053E-09	3.6300E-06
61	RHN-MAN05C	.23	27	2.6101E-09	1.5000E-01
62	CCX-EP-SAMX	.18	87	2.0631E-09	2.9400E-06
63	CCX-XMTRX	.17	97	1.9519E-09	2.6300E-06
64	IEV-CCWND	.14	69	1.6427E-09	3.7500E-03
65	PL50301ASA	.13	46	1.5472E-09	1.1600E-03
66	PL50301BSA	.13	46	1.5472E-09	1.1600E-03

67	EC1REDG2GA	.13	55	1.4516E-09	4.3600E-03
68	PMAX500ASA	.12	28	1.4189E-09	8.0000E-05
69	RHN-MAN05	.12	743	1.3963E-09	1.6000E-03
70	CCX-EP-SAM	.12	215	1.3927E-09	8.6200E-06
71	ZOX-PD-ER	.12	31	1.3907E-09	1.3000E-04
72	RNX-PM-FS	.11	48	1.2677E-09	7.7000E-04
73	PMA0301ASAX	.09	176	1.0879E-09	1.6500E-04
74	CCX-BY-PN	.09	237	1.0853E-09	4.7000E-05
75	PMA0301BSAX	.09	157	1.0602E-09	1.6500E-04
76	REC-MANDASC	.09	46	1.0312E-09	5.0600E-01
77	RNX-KV-GO	.08	42	9.7434E-10	6.1000E-04
78	LPM-MAN05	.08	37	9.7191E-10	6.8300E-04
79	IWBCV123AO	.08	132	9.5179E-10	5.8000E-04
80	IWBCV125AO	.08	132	9.5179E-10	5.8000E-04
81	REC-MANDAS	.07	36	8.5761E-10	1.1600E-02
82	ED2MOD03	.07	68	8.2166E-10	2.7000E-03
83	MDAS	.07	79	7.5911E-10	1.0000E-02
84	ZO1MOD04	.07	82	7.5593E-10	1.2500E-03
85	RNAMOD06S	.06	85	6.7790E-10	1.5300E-02
86	ED3MOD03	.06	35	6.5362E-10	2.2020E-03
87	PMAMOD12X	.06	123	6.3921E-10	6.5300E-04
88	PL4MOD11	.05	43	6.1730E-10	2.0900E-03
89	PL1MOD11	.05	36	6.1537E-10	2.0900E-03
90	PL7MOD11	.05	36	6.1537E-10	2.0900E-03
91	PMAXS00ASAX	.05	158	5.9517E-10	8.0000E-05
92	ED1MOD01	.05	22	5.8141E-10	5.0400E-04
93	ZOX-BL-ES	.05	15	5.6935E-10	6.0000E-05
94	SWBMOD09P	.05	31	5.4408E-10	1.8500E-03
95	CCX-BY-PN1	.05	16	5.4213E-10	5.7000E-05
96	IWACV123AO	.04	126	4.8183E-10	5.8000E-04
97	IWACV125AO	.04	126	4.8183E-10	5.8000E-04
98	IEV-LOSPND	.04	40	4.7027E-10	1.7100E-02
99	CCX-ORY-SP	.04	18	4.6569E-10	2.7700E-04
100	IEV-RNSND	.04	46	4.2095E-10	9.6100E-04
101	CCX-IV-XR	.03	132	3.8887E-10	2.4000E-05
102	SUC-R2S	.03	9	3.4566E-10	7.6000E-01
103	CCX-XMTR195	.03	16	3.3742E-10	2.0100E-04
104	IDAMOD08	.03	96	3.1023E-10	3.1700E-04
105	ZO2MOD04	.02	44	2.8786E-10	1.2500E-03
106	ED1MOD13	.02	16	2.7717E-10	3.1700E-04
107	ED1MOD07	.02	16	2.6655E-10	3.0500E-04
108	IDBBSDD1TM	.02	125	2.6042E-10	3.0000E-04
109	IDBBSDK1TM	.02	125	2.6042E-10	3.0000E-04
110	IDBBSDS1TM	.02	125	2.6042E-10	3.0000E-04
111	PL40301ASA	.02	29	2.5733E-10	1.1600E-03
112	PL40301BSA	.02	26	2.5698E-10	1.1600E-03
113	PL10301ASA	.02	25	2.5660E-10	1.1600E-03
114	PL70301ASA	.02	25	2.5660E-10	1.1600E-03
115	PL10301BSA	.02	24	2.5650E-10	1.1600E-03
116	PL70301BSA	.02	24	2.5650E-10	1.1600E-03
117	IEV-LOCAPRND	.02	59	2.4654E-10	1.5100E-05
118	CCX-PMAMOD4	.02	41	2.3507E-10	4.9800E-05
119	IDDBSDD1TM	.02	343	2.2667E-10	3.0000E-04
120	IDDBSDK1TM	.02	343	2.2667E-10	3.0000E-04
121	IDDBSDS1TM	.02	343	2.2667E-10	3.0000E-04
122	IWA-PLUG	.02	136	2.0911E-10	2.4000E-04
123	CCX-INPUT-LOGIC	.02	29	1.9140E-10	1.0300E-04
124	SWAMOD07	.02	39	1.8637E-10	7.1200E-03
125	PMA0302ASAX	.01	59	1.4110E-10	1.6500E-04
126	RNDEP023SA	.01	267	1.2737E-10	1.7100E-04
127	OTH-R2	.01	29	1.2447E-10	2.4000E-01
128	CCX-PL4MOD1	.01	15	1.1786E-10	1.4100E-04
129	PMA0302BSAX	.01	40	1.1338E-10	1.6500E-04
130	CCAMOD02	.01	37	1.1131E-10	7.1000E-03
131	IW1OR170SPX	.01	34	1.0706E-10	9.4600E-05
132	IW2OR160SPX	.01	34	1.0706E-10	9.4600E-05
133	CCX-PMDMOD1	.01	249	1.0436E-10	1.4100E-04
134	EC5EPMGB1SA	.01	8	8.7669E-11	1.7100E-04
135	PXX-AV-LA	.01	57	8.3091E-11	6.1000E-05
136	CCX-PMAMOD2X	.01	22	8.1518E-11	8.5800E-05
137	ADN-MAN01	.01	58	7.9719E-11	4.9300E-04
138	IW1TL170UFX	.01	33	7.7478E-11	6.8400E-05
139	IW2TL160UFX	.01	33	7.7478E-11	6.8400E-05
140	EC1MOD12	.01	66	7.4091E-11	4.8000E-05
141	CCX-PL1MOD1	.01	8	7.2306E-11	1.4100E-04
142	CCX-PL7MOD1	.01	8	7.2306E-11	1.4100E-04
143	IDAMOD02	.01	31	7.0216E-11	2.7000E-03
144	IDAMOD03	.01	31	7.0216E-11	2.7000E-03
145	IDAMOD06	.01	48	6.4733E-11	4.3200E-05
146	CCX-PL403	.00	12	4.9853E-11	9.6900E-05
147	CCX-PMAMOD4-SW	.00	12	4.9042E-11	1.1000E-05

148	IRAEP121ASAX	.00	42	4.7909E-11	5.8300E-05
149	EC1REDG1GA	.00	37	4.7551E-11	4.3600E-03
150	ED3MOD01	.00	10	4.3471E-11	5.0400E-04
151	DG1-LOGIC	.00	1	4.0700E-11	5.0000E-03
152	PMAMOD41	.00	34	2.7780E-11	6.3500E-04
153	IDABSDS1LF	.00	24	2.6649E-11	4.8000E-06
154	CCX-LS-FA	.00	32	2.5495E-11	5.3700E-06
155	ED3MOD07	.00	26	2.4788E-11	3.0500E-04
156	CCX-INPUT-LOGICX	.00	12	2.4188E-11	2.5900E-05
157	EC1MOD121	.00	24	2.3859E-11	1.6800E-05
158	ZO2DG002TM	.00	42	2.2868E-11	4.6000E-02
159	RNX-CV-GO	.00	11	2.2157E-11	5.1000E-05
160	CCX-PL103	.00	6	1.8601E-11	9.6900E-05
161	CCX-PL703	.00	6	1.8601E-11	9.6900E-05
162	CCX-PMD030	.00	163	1.7994E-11	9.6900E-05
163	CCX-PMAEH0X	.00	11	1.7939E-11	4.0300E-06
164	PL5XS00ASA	.00	6	1.5354E-11	8.0000E-05
165	IDAMOD07	.00	15	1.4597E-11	2.1900E-02
166	SWAMOD09P	.00	22	1.3491E-11	1.8500E-03
167	PMAMOD21X	.00	14	1.2163E-11	1.1600E-03
168	CCX-IN-LOGIC-SW	.00	8	9.9537E-12	1.1000E-05
169	CCX-PMAMOD2-SW	.00	8	9.9537E-12	1.1000E-05
170	IDBFD013RQ	.00	10	8.5301E-12	1.2000E-05
171	IDBFD014RQ	.00	10	8.5301E-12	1.2000E-05
172	IDCFD007RQ	.00	8	8.2532E-12	1.2000E-05
173	IDCFD008RQ	.00	8	8.2532E-12	1.2000E-05
174	CCX-PMDMOD4	.00	118	8.1162E-12	4.9800E-05
175	ALL-IND-FAIL	.00	27	7.3440E-12	1.0000E-06
176	RNX-PM-ER	.00	10	6.8751E-12	1.6000E-05
177	RHN-MAN03	.00	36	6.6279E-12	2.2600E-03
178	AD2MOD01	.00	21	6.3662E-12	5.5400E-02
179	AD2MOD02	.00	21	6.3662E-12	5.5400E-02
180	AD3MOD03	.00	21	6.3662E-12	5.5400E-02
181	AD3MOD04	.00	21	6.3662E-12	5.5400E-02
182	CCX-PM-ER	.00	10	6.0156E-12	1.4000E-05
183	SWX-PM-ER	.00	10	6.0156E-12	1.4000E-05
184	ED2MOD11	.00	20	5.3288E-12	3.1700E-04
185	EC1BS001LF	.00	7	5.1700E-12	4.8000E-06
186	ZANMOD01	.00	8	4.8314E-12	8.4000E-05
187	CCX-IV-XR1	.00	6	4.6030E-12	2.4000E-05
188	CCX-PL4MOD1-SW	.00	8	4.5841E-12	1.1000E-05
189	EC2BS002TM	.00	178	3.9492E-12	2.7000E-03
190	EC2BS022TM	.00	178	3.9492E-12	2.7000E-03
191	EC2BS221TM	.00	178	3.9492E-12	2.7000E-03
192	CCX-EP-SA	.00	8	3.5885E-12	8.6200E-06
193	PL4MOD12	.00	16	3.4699E-12	2.0900E-03
194	IDBBSDD1LF	.00	7	3.4067E-12	4.8000E-06
195	IDBBSDK1LF	.00	7	3.4067E-12	4.8000E-06
196	IDBBSDS1LF	.00	7	3.4067E-12	4.8000E-06
197	IDCBSDD1LF	.00	4	3.2949E-12	4.8000E-06
198	IDCBSDK1LF	.00	4	3.2949E-12	4.8000E-06
199	IDCBSDS1LF	.00	4	3.2949E-12	4.8000E-06
200	EC1MOD01	.00	16	3.2830E-12	2.0200E-04
201	PMAEH0A1SAX	.00	6	2.7225E-12	8.0000E-05
202	PMDMOD11	.00	194	2.6151E-12	2.0900E-03
203	PMAMOD42	.00	4	2.5390E-12	6.3500E-04
204	EC2MOD01	.00	14	2.5059E-12	2.0200E-04
205	CCX-PL1MOD1-SW	.00	4	1.9811E-12	1.1000E-05
206	CCX-PL7MOD1-SW	.00	4	1.9811E-12	1.1000E-05
207	RNAEPRNPSA	.00	9	1.7508E-12	1.7100E-04
208	RNBEPRNPSA	.00	9	1.7508E-12	1.7100E-04
209	ZON-MAN01	.00	7	1.7244E-12	2.6700E-03
210	SWNTP001RI	.00	5	1.5824E-12	5.2300E-03
211	SWB-MAN02	.00	4	1.5079E-12	1.6000E-03
212	SW7EPSBPASA	.00	7	1.4734E-12	1.7100E-04
213	IDDFD019RQ	.00	51	1.4267E-12	1.2000E-05
214	IDDFD020RQ	.00	51	1.4267E-12	1.2000E-05
215	CCB-MAN01	.00	6	1.4190E-12	1.0700E-03
216	PL1MOD12	.00	7	1.4055E-12	2.0900E-03
217	PL7MOD12	.00	7	1.4055E-12	2.0900E-03
218	CCX-PMDMOD1-SW	.00	49	1.3046E-12	1.1000E-05
219	CCX-PMDMOD4-SW	.00	49	1.3046E-12	1.1000E-05
220	PL40302ASA	.00	7	1.1774E-12	1.1600E-03
221	PMD0301ASA	.00	125	1.1577E-12	1.1600E-03
222	CCNTF101RI	.00	5	1.0836E-12	5.2300E-03
223	PMAMOD22X	.00	2	1.0720E-12	1.1600E-03
224	PMD0301BSA	.00	108	1.0456E-12	1.1600E-03
225	CC1EPSBPASA	.00	6	1.0401E-12	1.7100E-04
226	ZO1MOD03	.00	8	1.0089E-12	1.0000E-04
227	DG2-LOGIC	.00	1	9.6501E-13	5.0000E-03
228	PMDMOD12	.00	83	9.0394E-13	2.0900E-03

229	SW7EPSBPBSA	.00	5	8.7430E-13	1.7100E-04
230	CC1EPSBPBSA	.00	5	8.7408E-13	1.7100E-04
231	PL40302BSA	.00	4	8.1801E-13	1.1600E-03
232	SW7EPCTFASA	.00	4	7.8104E-13	1.7100E-04
233	SW7EPCTFBSA	.00	4	7.8604E-13	1.7100E-04
234	ED1BSDS1LF	.00	3	7.8693E-13	4.8000E-06
235	ADX-MV-GO	.00	4	7.4873E-13	1.1000E-03
236	DAS	.00	4	7.3730E-13	1.0000E-02
237	CCX-AV-LA	.00	5	6.2306E-13	6.1000E-05
238	ZO2MOD03	.00	5	5.8920E-13	1.0000E-04
239	CMX-VS-FA	.00	7	5.2991E-13	3.8400E-05
240	CMX-CV-GO	.00	4	5.2014E-13	5.1000E-05
241	ED3BSDS1TM	.00	1	4.8805E-13	3.0000E-04
242	IWNTK001AF	.00	5	4.8728E-13	2.4000E-06
243	IDDBSDD1LF	.00	28	4.7418E-13	4.8000E-06
244	IDDBSDK1LF	.00	28	4.7418E-13	6.8000E-06
245	IDDBSDS1LF	.00	28	4.7418E-13	4.8000E-06
246	PMDMOD41	.00	67	4.6607E-13	6.3500E-04
247	RC1OR195SP	.00	4	4.5386E-13	7.2200E-03
248	PL10302ASA	.00	3	4.3932E-13	1.1600E-03
249	PL70302ASA	.00	3	4.3932E-13	1.1600E-03
250	CCX-PMDEHO	.00	26	3.9613E-13	4.0300E-06
251	PRAAV108LA	.00	11	3.5205E-13	1.0900E-03
252	PRBAV108LA	.00	11	3.5205E-13	1.0900E-03
253	PMD0302ASA	.00	46	3.4461E-13	1.1600E-03
254	PL10302BSA	.00	2	3.4395E-13	1.1600E-03
255	PL70302BSA	.00	2	3.4395E-13	1.1600E-03
256	IDDMOD33	.00	45	3.3440E-13	5.1600E-04
257	PL1MOD51	.00	2	3.2996E-13	8.7400E-04
258	RC1TL195UF	.00	3	3.2829E-13	5.2300E-03
259	CCX-HE-AF	.00	3	3.1908E-13	1.2000E-06
260	IDDMOD32	.00	58	3.1120E-13	3.1700E-04
261	PL1XS00ASA	.00	3	2.9976E-13	8.0000E-05
262	PL4XS00ASA	.00	3	2.9976E-13	8.0000E-05
263	PL7XS00ASA	.00	3	2.9976E-13	8.0000E-05
264	CCX-BC-SA	.00	5	2.8300E-13	8.4000E-06
265	PLMMOD41	.00	2	2.4203E-13	6.3500E-04
266	PMD0302BSA	.00	29	2.3248E-13	1.1600E-03
267	PRN-MAN01	.00	2	1.8641E-13	4.0800E-04
268	EC2MOD22	.00	17	1.8141E-13	4.8000E-05
269	PRAAV108TM	.00	9	1.6143E-13	5.0000E-04
270	PRBAV108TM	.00	9	1.6143E-13	5.0000E-04
271	CCX-TRNSM	.00	2	1.4899E-13	2.0100E-04
272	EC1MOD13	.00	2	1.4067E-13	4.8000E-05
273	EC2MOD23	.00	2	1.4067E-13	4.8000E-05
274	CCX-XMTR	.00	3	1.3822E-13	2.0100E-04
275	IDDMOD38	.00	31	1.1935E-13	3.1700E-04
276	ZOX-BL-ER	.00	1	9.6367E-14	1.3600E-06
277	ED2MOD01	.00	1	9.5368E-14	5.0400E-04
278	ZOX-FL-GP	.00	1	9.2149E-14	1.3000E-06
279	PMDXS00ASA	.00	32	7.0721E-14	8.0000E-05
280	PMDEH0A1SA	.00	28	6.2061E-14	8.0000E-05
281	IDDMOD21	.00	6	4.9960E-14	1.9200E-04
282	PMDMOD42	.00	11	4.0967E-14	6.3500E-04
283	IDABSDD1TM	.00	3	3.1641E-14	3.0000E-04
284	IDABSDK1TM	.00	3	3.1641E-14	3.0000E-04
285	PRX-HR-ML	.00	4	2.4314E-14	1.2000E-07
286	PMDEH0A2SA	.00	10	1.7764E-14	8.0000E-05
287	IDDMOD34	.00	10	1.2212E-14	4.3200E-05
288	IDDMOD35	.00	4	5.7732E-15	2.1900E-02
289	EC2MOD221	.00	3	1.3323E-15	1.6800E-05
290	IWX-XMTRLW	.00	2	1.3323E-15	9.2000E-09
291	IDDMOD22	.00	3	9.9920E-16	2.7000E-03
292	IDDMOD23	.00	3	9.9920E-16	2.7000E-03
293	PRCEP108SA	.00	1	2.2204E-16	1.7100E-04
294	PRDFP108SA	.00	1	2.2204E-16	1.7100E-04

	BASIC EVENT	IMPORTANCE (%INCREASE)	NUMBER OF CUTSETS	INCREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1	CCX-SPTW	487621.	26	5.6195E-03	1.2000E-06
2	IEV-RCSOD	429970.	457	4.9551E-03	4.4400E-06
3	IEV-CCWD	124277.	1942	1.4322E-03	6.0200E-04
4	IEV-RNSD	119245.	933	1.3742E-03	8.1500E-05
5	IWX-FL-GP	66127.2	168	7.6208E-04	1.2000E-05
6	IWX-CV-AO	66045.8	395	7.6114E-04	3.1000E-05
7	ADX-EV-SA	64709.0	290	7.4574E-04	3.8000E-05
8	IWX-MV-GO1	64685.7	266	7.4546E-04	3.8000E-05
9	CCX-ORY-SPX	64667.2	112	7.4525E-04	3.6300E-06
10	CCX-KMTRX	64401.2	97	7.4218E-04	2.6300E-06
11	IWB-PLUG	62580.0	382	7.2120E-04	2.4000E-04
12	CCX-PMAMOD1-SW	61881.9	128	7.1315E-04	1.1000E-05
13	CCX-PMAMOD1X	61227.6	195	7.0561E-04	4.6300E-05
14	CCX-EP-SAMX	60889.9	87	7.0172E-04	2.9400E-06
15	CCX-PMA030X	60862.4	130	7.0140E-04	1.3800E-05
16	IDCBSDD1TM	59723.1	126	6.8827E-04	3.0000E-04
17	IDCBSDK1TM	59723.1	126	6.8827E-04	3.0000E-04
18	IDCBSDS1TM	59723.1	126	6.8827E-04	3.0000E-04
19	IRAEP121BSAX	52454.3	45	6.0450E-04	5.8300E-05
20	IEV-LOCA24D	40184.6	393	4.6310E-04	1.1300E-05
21	IEV-LOCA24ND	25179.3	121	2.9018E-04	1.6800E-05
22	CCX-EP-SAM	14019.3	215	1.6156E-04	8.6200E-06
23	CCX-PMAMOD1	3040.10	87	3.5035E-05	1.4100E-04
24	CCX-PMA030	2782.86	59	3.2071E-05	9.6900E-05
25	IEV-LOSPD	2778.91	2394	3.2025E-05	4.4400E-03
26	IDAMOD05	2294.61	354	2.5444E-05	5.1600E-04
27	IDAMOD04	2282.16	340	2.6300E-05	3.1700E-04
28	IDABSDS1TM	2201.19	255	2.5367E-05	3.0000E-04
29	CCX-BY-PN	2003.56	237	2.3090E-05	4.7000E-05
30	PMAMOD11	1928.43	296	2.2224E-05	2.0900E-03
31	PMA0301ASA	1885.46	218	2.1729E-05	1.1600E-03
32	PMA0301BSA	1885.46	218	2.1729E-05	1.1600E-03
33	PMAXS00ASA	1538.93	28	1.7735E-05	8.0000E-05
34	IEV-LOCAPRND	1416.72	59	1.6327E-05	1.5100E-05
35	CCX-IV-XR	1405.95	132	1.6203E-05	2.4000E-05
36	ED1MOD03	1024.68	130	1.1809E-05	2.2020E-03
37	ZOX-PD-ES	984.451	112	1.1345E-05	2.0000E-03
38	ECX-CB-GO	983.992	91	1.1340E-05	1.2000E-05
39	ECX-CB-GC	980.760	73	1.1303E-05	7.3000E-04
40	ZOX-DG-DS	979.932	49	1.1293E-05	2.8000E-04
41	ZOX-DG-DR	979.109	56	1.1284E-05	4.4000E-04
42	ED1MOD11	974.509	54	1.1231E-05	3.1700E-04
43	ED1MOD113	974.509	54	1.1231E-05	3.1700E-04
44	ZOX-PD-ER	928.132	31	1.0696E-05	1.3000E-04
45	CCX-BY-PN1	825.250	16	9.5105E-06	5.7000E-05
46	ZOX-BL-ES	823.345	15	9.4885E-06	6.0000E-05
47	ALL-IND-FAIL	637.259	27	7.3440E-06	1.0000E-06
48	PMAXS00ASAX	634.653	158	7.3140E-06	8.0000E-05
49	PMAMOD11X	583.004	369	6.7188E-06	6.5300E-04
50	PMA0301ASAX	572.046	176	6.5925E-06	1.6500E-04
51	PMA0301BSAX	557.466	157	6.4245E-06	1.6500E-04
52	IDABSDS1LF	481.755	24	5.5519E-06	4.8000E-06
53	IWN-MAN00	451.699	189	5.2056E-06	1.1500E-03
54	CCX-LS-FA	411.959	32	4.7476E-06	5.3700E-06
55	CCX-PMAMOD4	409.572	41	4.7201E-06	4.9800E-05
56	CCX-PMAMOD4-SW	386.858	12	4.4583E-06	1.1000E-05
57	CCX-PMAEHOX	386.255	11	4.4513E-06	4.0300E-06
58	CCX-INPUT-LOGIC	161.233	29	1.8581E-06	1.0300E-04
59	CCX-ORY-SP	145.842	18	1.6807E-06	2.7700E-04
60	CCX-XMTR195	145.638	16	1.6784E-06	2.0100E-04
61	RNX-PM-FS	142.748	48	1.6451E-06	7.7000E-04
62	IWBCV123AO	142.313	132	1.6401E-06	5.8000E-04
63	IWBCV125AO	142.313	132	1.6401E-06	5.8000E-04
64	IWBCV122AO	141.920	132	1.6355E-06	1.7500E-03
65	IWBCV124AO	141.920	132	1.6355E-06	1.7500E-03
66	EC1BS001TM	138.680	442	1.5982E-06	2.7000E-03
67	EC1BS012TM	138.680	442	1.5982E-06	2.7000E-03
68	EC1BS121TM	138.680	442	1.5982E-06	2.7000E-03
69	RNX-KV-GO	138.515	42	1.5963E-06	6.1000E-04
70	EC1MOD12	133.932	66	1.5435E-06	4.8000E-05
71	IDAMOD06	130.018	48	1.4984E-06	4.3200E-05
72	PL5MOD11	129.990	72	1.4980E-06	2.0900E-03

73	LPM-MAN05	123.393	37	1.4220E-06	6.8300E-04
74	EC1MOD121	123.231	24	1.4202E-06	1.6800E-05
75	PXX-AV-LA	118.190	57	1.3621E-06	6.1000E-05
76	PL50301ASA	115.600	46	1.3322E-06	1.1600E-03
77	PL50301BSA	115.600	46	1.3322E-06	1.1600E-03
78	ZO1MOD01	103.382	518	1.1914E-06	2.0200E-02
79	ED1MOD01	100.049	22	1.1530E-06	5.0400E-04
80	IW1TL170UFX	98.2824	33	1.1326E-06	6.8400E-05
81	IW2TL160UFX	98.2824	33	1.1326E-06	6.8400E-05
82	IW1OR1708PX	98.1956	34	1.1316E-06	9.4600E-05
83	IW2OR160SPX	98.1956	34	1.1316E-06	9.4600E-05
84	EC1CB100VO	96.6542	375	1.1139E-06	1.2300E-02
85	EC1BS001LF	93.4604	7	1.0771E-06	4.8000E-06
86	IDAMOD08	84.8922	96	9.7833E-07	3.1700E-04
87	PMAMOD12X	84.8852	123	9.7825E-07	6.5300E-04
88	CCX-PMAMOD2X	82.4348	22	9.5001E-07	8.5800E-05
89	CCX-INPUT-LOGICX	81.0340	12	9.3387E-07	4.5900E-05
90	CCX-IN-LOGIC-SW	78.5181	8	9.0487E-07	1.1000E-05
91	CCX-PMAMOD2-SW	78.5181	8	9.0487E-07	1.1000E-05
92	ED1MOD13	75.8458	16	8.7408E-07	3.1700E-04
93	ED1MOD07	75.8110	16	8.7367E-07	3.0500E-04
94	RHN-MAN05	75.6023	743	8.7127E-07	1.6000E-03
95	IWA-PLUG	75.5854	136	8.7107E-07	2.4000E-04
96	IDBBSDD1TM	75.3005	125	8.6779E-07	3.0000E-04
97	IDBBSDK1TM	75.3005	125	8.6779E-07	3.0000E-04
98	IDBBSDS1TM	75.3005	125	8.6779E-07	3.0000E-04
99	PMA0302ASAX	74.1932	59	8.5503E-07	1.6500E-04
100	CCX-PL4MOD1	72.5212	15	8.3576E-07	1.4100E-04
101	IWACV123AO	72.0439	126	8.3026E-07	5.8000E-04
102	IWACV125AO	72.0439	126	8.3026E-07	5.8000E-04
103	IRAEP121ASAX	71.3025	42	8.2172E-07	5.8300E-05
104	IDDBSDD1TM	65.5430	343	7.5534E-07	3.0000E-04
105	IDDBSDK1TM	65.5430	343	7.5534E-07	3.0000E-04
106	IDDBSDS1TM	65.5430	343	7.5534E-07	3.0000E-04
107	RNDEP023SA	64.6235	267	7.4475E-07	1.7100E-04
108	CCX-PMDMOD1	64.2159	249	7.4005E-07	1.4100E-04
109	IDBFD013RQ	61.6806	10	7.1083E-07	1.2000E-05
110	IDBFD014RQ	61.6806	10	7.1083E-07	1.2000E-05
111	IDBBSDD1LF	61.5851	7	7.0973E-07	4.8000E-06
112	IDBBSDK1LF	61.5851	7	7.0973E-07	4.8000E-06
113	IDBBSDS1LF	61.5851	7	7.0973E-07	4.8000E-06
114	IDCFD007RQ	59.6784	8	6.8776E-07	1.2000E-05
115	IDCFD008RQ	59.6784	8	6.8776E-07	1.2000E-05
116	PMA0302BSAX	59.6135	40	6.8701E-07	1.6500E-04
117	IDCBSDD1LF	59.5640	4	6.8644E-07	4.8000E-06
118	IDCBSDK1LF	59.5640	4	6.8644E-07	4.8000E-06
119	IDCBSDS1LF	59.5640	4	6.8644E-07	4.8000E-06
120	ZO1MOD04	52.4098	82	6.0399E-07	1.2500E-03
121	CCX-PL403	44.6383	12	5.1443E-07	9.6900E-05
122	CCX-PL1MOD1	44.4915	8	5.1274E-07	1.4100E-04
123	CCX-PL7MOD1	44.4915	8	5.1274E-07	1.4100E-04
124	EC5EPMGB1SA	44.4793	8	5.1260E-07	1.7100E-04
125	IEV-RNSND	37.9729	46	4.3761E-07	9.6100E-04
126	IEV-CCWND	37.8690	69	4.3642E-07	3.7500E-03
127	RNX-CV-GO	37.6962	11	4.3443E-07	5.1000E-05
128	RNX-PM-ER	37.2848	10	4.2968E-07	1.6000E-05
129	CCX-PM-ER	37.2846	10	4.2968E-07	1.4000E-05
130	SWX-PM-ER	37.2846	10	4.2968E-07	1.4000E-05
131	CCX-PL4MOD1-SW	36.1610	8	4.1673E-07	1.1000E-05
132	CCX-EP-SA	36.1227	8	4.1629E-07	8.6200E-06
133	ZO2MOD01	34.0246	181	3.9211E-07	2.0200E-02
134	RNBMOD07S	33.3259	141	3.8406E-07	1.5300E-02
135	EC2CB200VO	32.6089	139	3.7580E-07	1.2300E-02
136	SWBMOD02	32.2417	147	3.7157E-07	2.4400E-02
137	CCBMOD01S	30.9650	88	3.5685E-07	1.0400E-02
138	EC1REDG2GA	28.7635	55	3.3148E-07	4.3600E-03
139	ED2MOD03	26.3351	68	3.0350E-07	2.7000E-03
140	ED3MOD03	25.6999	35	2.9618E-07	2.2020E-03
141	PL4MOD11	25.5757	43	2.9474E-07	2.0900E-03
142	PL1MOD11	25.4954	36	2.9382E-07	2.0900E-03
143	PL7MOD11	25.4954	36	2.9382E-07	2.0900E-03
144	SWBMOD09P	25.4724	31	2.9355E-07	1.8500E-03
145	IWN-MAN00C	23.1650	23	2.6696E-07	5.0000E-02
146	CCX-HE-AF	23.0727	3	2.6590E-07	1.2000E-06
147	RHN-MAN04	21.4931	122	2.4769E-07	5.0000E-02
148	ZO2MOD04	19.9579	44	2.3000E-07	1.2500E-03
149	PL40301ASA	19.2273	29	2.2158E-07	1.1600E-03
150	PL40301BSA	19.2005	26	2.2127E-07	1.1600E-03
151	PL10301ASA	19.1722	25	2.2095E-07	1.1600E-03
152	PL70301ASA	19.1722	25	2.2095E-07	1.1600E-03
153	PL10301BSA	19.1650	24	2.2087E-07	1.1600E-03

154	PL70301BSA	19.1650	24	2.2087E-07	1.1600E-03
155	IWNTK001AF	17.6176	5	2.0303E-07	2.4000E-06
156	PRX-HR-ML	17.5815	4	2.0262E-07	1.2000E-07
157	CCX-PL103	16.6552	6	1.9194E-07	9.6900E-05
158	CCX-PL703	16.6552	6	1.9194E-07	9.6900E-05
159	PL5XS00ASA	16.6526	6	1.9191E-07	8.0000E-05
160	OTH-R1	16.6477	2242	1.9185E-07	4.2000E-01
161	CCX-IV-XR1	16.6418	6	1.9179E-07	2.4000E-05
162	CCX-PMD030	16.1118	163	1.8568E-07	9.6900E-05
163	CCX-PL1MOD1-SW	15.6274	4	1.8010E-07	1.1000E-05
164	CCX-PL7MOD1-SW	15.6274	4	1.8010E-07	1.1000E-05
165	ED1BSDS1LF	14.2257	3	1.6394E-07	4.8000E-06
166	CCX-PMDMOD4	14.1411	118	1.6297E-07	4.9800E-05
167	ADN-MAN01	14.0243	58	1.6162E-07	4.9300E-04
168	IWX-XMTRLW	12.5657	2	1.4481E-07	9.2000E-09
169	IDDFD019RQ	10.3168	51	1.1889E-07	1.2000E-05
170	IDDFD020RQ	10.3168	51	1.1889E-07	1.2000E-05
171	CCX-PMDMOD1-SW	10.2913	49	1.1860E-07	1.1000E-05
172	CCX-PMDMOD4-SW	10.2913	49	1.1860E-07	1.1000E-05
173	IDDBSDD1LF	8.57194	20	9.8786E-08	4.8000E-06
174	IDDBSDK1LF	8.57194	28	9.8786E-08	4.8000E-06
175	IDDBSDS1LF	8.57194	28	9.8786E-08	4.8000E-06
176	CCX-PMDEH0	8.52925	26	9.8294E-08	4.0300E-06
177	ED3MOD01	7.48046	10	8.6208E-08	5.0400E-04
178	ED3MOD07	7.05012	26	8.1248E-08	3.0500E-04
179	MDAS	6.52112	79	7.5152E-08	1.0000E-02
180	REC-MANDAS	6.34086	36	7.3074E-08	1.1600E-02
181	ZOX-FL-GP	6.15073	1	7.0883E-08	1.3000E-06
182	ZOX-BL-ER	6.14855	1	7.0858E-08	1.3600E-06
183	ZO1DG001TM	5.24938	95	6.0496E-08	4.6000E-02
184	ZANMOD01	4.99041	8	5.7511E-08	8.4000E-05
185	PMAMOD41	3.79378	34	4.3721E-08	6.3500E-04
186	RNAMOD06ᵉ	3.78582	85	4.3629E-08	1.5300E-02
187	PMAEH0A1SAX	2.95273	6	3.4028E-08	8.0000E-05
188	CCX-BC-SA	2.92334	5	3.3690E-08	8.4000E-06
189	IEV-LOSPND	2.34553	40	2.7031E-08	1.7100E-02
190	SWAMOD07	2.25520	39	2.5990E-08	7.1200E-03
191	IDAMOD02	2.25052	31	2.5936E-08	2.7000E-03
192	IDAMOD03	2.25052	31	2.5936E-08	2.7000E-03
193	ED2MOD11	1.45821	20	1.6805E-08	3.1700E-04
194	EC1MOD01	1.41000	16	1.6249E-08	2.0200E-04
195	CCAMOD02	1.35077	37	1.5567E-08	7.1000E-03
196	RHN-MAN05C	1.28342	27	1.4791E-08	1.5000E-01
197	CMX-VS-FA	1.19739	7	1.3799E-08	3.8400E-05
198	EC2MOD01	1.07623	14	1.2403E-08	2.0200E-04
199	EC1REDG1GA	.942230	37	1.0859E-08	4.3600E-03
200	PMAMOD21X	.908772	14	1.0473E-08	1.1600E-03
201	RNAEPRNPSA	.888289	9	1.0237E-08	1.7100E-04
202	RNBEPRNPSA	.888289	9	1.0237E-08	1.7100E-04
203	CCX-AV-LA	.886246	5	1.0213E-08	6.1000E-05
204	CMX-CV-GO	.884932	4	1.0198E-08	5.1000E-05
205	ZO1MOD03	.875326	8	1.0088E-08	1.0000E-04
206	SW7EPSBFASA	.747526	7	8.6148E-09	1.7100E-04
207	DG1-LOGIC	.702797	1	8.0993E-09	5.0000E-03
208	SWAMOD09P	.631622	22	7.2791E-09	1.8500E-03
209	CC1EPSBPASA	.527678	6	6.0812E-09	1.7100E-04
210	ZO2MOD03	.511209	5	5.8914E-09	1.0000E-04
211	SW7EPSBPBSA	.443581	5	5.1120E-09	1.7100E-04
212	CC1EPSBPBSA	.443468	5	5.1107E-09	1.7100E-04
213	SW7EPCTFASA	.399814	4	4.6076E-09	1.7100E-04
214	SW7EPCTFBSA	.399814	4	4.6076E-09	1.7100E-04
215	PMAMOD42	.346729	4	3.9958E-09	6.3500E-04
216	EC2MOD22	.327931	17	3.7792E-09	4.8000E-05
217	PL1XS00ASA	.325111	3	3.7467E-09	8.0000E-05
218	PL4XS00ASA	.325111	3	3.7467E-09	8.0000E-05
219	PL7XS00ASA	.325111	3	3.7467E-09	8.0000E-05
220	EC1MOD13	.254277	2	2.9304E-09	4.8000E-05
221	EC2MOD23	.254277	2	2.9304E-09	4.8000E-05
222	RHN-MAN03	.253904	36	2.9261E-09	2.2600E-03
223	SUC-R1S	.244857	152	2.8218E-09	5.8000E-01
224	PL4MOD12	.143762	16	1.6568E-09	2.0900E-03
225	ED3BSDS1TM	.141123	1	1.6264E-09	3.0000E-04
226	EC2BS002TM	.126576	178	1.4587E-09	2.7000E-03
227	EC2BS022TM	.126576	178	1.4587E-09	2.7000E-03
228	EC2BS221TM	.126576	178	1.4587E-09	2.7000E-03
229	CCB-MAN01	.114950	6	1.3247E-09	1.0700E-03
230	PMDMOD11	.108348	194	1.2486E-09	2.0900E-03
231	PL40302ASA	8.797138E-02	7	1.0138E-09	1.1600E-03
232	REC-MANDASC	8.735669E-02	46	1.0067E-09	5.0600E-01
233	PMD0301ASA	8.650312E-02	125	9.9689E-10	1.1600E-03
234	IDDMOD32	8.515672E-02	58	9.8138E-10	3.1700E-04

235	SWB-MAN02	8.164717E-02	4	9.4093E-10	1.6000E-03
236	PMAMOD22X	8.009917E-02	2	9.2309E-10	1.1600E-03
237	PMD0301BSA	7.812490E-02	108	9.0034E-10	1.1600E-03
238	PMDXS00ASA	7.670215E-02	32	8.8394E-10	8.0000E-05
239	PMDEH0A1SA	6.731004E-02	28	7.7571E-10	8.0000E-05
240	CCX-TRNSM	6.430755E-02	2	7.4110E-10	2.0100E-04
241	PMDMOD41	6.364813E-02	67	7.3350E-10	6.3500E-04
242	PL40302BSA	6.111958E-02	4	7.0437E-10	1.1600E-03
243	CCX-XMTR	5.965939E-02	3	6.8754E-10	2.0100E-04
244	ADX-MV-GO	5.899833E-02	4	6.7992E-10	1.1000E-03
245	PL1MOD12	5.823332E-02	7	6.7110E-10	2.0900E-03
246	PL7MOD12	5.823332E-02	7	6.7110E-10	2.0900E-03
247	IDAMOD07	5.657114E-02	15	6.5195E-10	2.1900E-02
248	IDDMOD33	5.620487E-02	45	6.4773E-10	5.1600E-04
249	ZON-MAN01	5.589176E-02	7	6.4412E-10	2.6700E-03
250	ZO2DG002TM	4.115226E-02	42	4.7425E-10	4.6000E-02
251	PRN-MAN01	3.962836E-02	4	4.5669E-10	4.0800E-04
252	RHN-MAN04-SUCC	3.951797E-02	373	4.5542E-10	9.4500E-01
253	PMDMOD12	3.745148E-02	83	4.3160E-10	2.0900E-03
254	OTH-R2	3.420164E-02	29	3.9415E-10	2.4000E-01
255	PLMMOD41	3.305215E-02	2	3.8091E-10	6.3500E-04
256	PL10302ASA	3.282440E-02	3	3.7828E-10	1.1600E-03
257	PL70302ASA	3.282440E-02	3	3.7828E-10	1.1600E-03
258	PL1MOD51	3.273033E-02	2	3.7720E-10	8.7400E-04
259	IDDMOD38	3.265911E-02	31	3.7638E-10	3.1700E-04
260	PRAAV108TM	2.800077E-02	9	3.2269E-10	5.0000E-04
261	PRBAV108TM	2.800077E-02	9	3.2269E-10	5.0000E-04
262	PRAAV108LA	2.799554E-02	11	3.2263E-10	1.0900E-03
263	PRBAV108LA	2.799554E-02	11	3.2263E-10	1.0900E-03
264	SWNTP001RI	2.611681E-02	5	3.0098E-10	5.2300E-03
265	PMD0302ASA	2.574853E-02	46	2.9674E-10	1.1600E-03
266	PL10302BSA	2.569876E-02	2	2.9616E-10	1.1600E-03
267	PL70302BSA	2.569876E-02	2	2.9616E-10	1.1600E-03
268	IDDMOD34	2.452918E-02	10	2.8268E-10	4.3200E-05
269	IDDMOD21	2.257463E-02	6	2.6016E-10	1.9200E-04
270	PMDEH0A2SA	1.926585E-02	10	2.2203E-10	8.0000E-05
271	CCNTF101RI	1.788396E-02	5	2.0610E-10	5.2300E-03
272	PMD0302BSA	1.737030E-02	29	2.0018E-10	1.1600E-03
273	DG2-LOGIC	1.666348E-02	1	1.9204E-10	5.0000E-03
274	ED2MOD01	1.641105E-02	1	1.8913E-10	5.0400E-04
275	SUC-R2S	9.471867E-03	9	1.0916E-10	7.6000E-01
276	AD2MOD01	9.418979E-03	21	1.0855E-10	5.5400E-02
277	AD2MOD02	9.418979E-03	21	1.0855E-10	5.5400E-02
278	AD3MOD03	9.418979E-03	21	1.0855E-10	5.5400E-02
279	AD3MOD04	9.418979E-03	21	1.0855E-10	5.5400E-02
280	IDABSDD1TM	9.149263E-03	3	1.0544E-10	3.0000E-04
281	IDABSDK1TM	9.149263E-03	3	1.0544E-10	3.0000E-04
282	EC2MOD221	6.881094E-03	3	7.9300E-11	1.6800E-05
283	DAS	6.333758E-03	4	7.2993E-11	1.0000E-02
284	PMDMOD42	5.594607E-03	11	6.4474E-11	6.3500E-04
285	RC1TL195UF	5.418326E-03	3	6.2443E-11	5.2300E-03
286	RC1OR195SP	5.415263E-03	4	6.2408E-11	7.2200E-03
287	PRCEP108SA	1.126555E-04	1	1.2983E-12	1.7100E-04
288	PRDEP108SA	1.126555E-04	1	1.2983E-12	1.7100E-04
289	IDDMOD22	3.202561E-05	3	3.6908E-13	2.7000E-03
290	IDDMOD23	3.202561E-05	3	3.6908E-13	2.7000E-03
291	IDDMOD35	2.237357E-05	4	2.5784E-13	2.1900E-02
292	RN23MOD5S	.000000	875	0.0000E+00	1.0000E+00
293	IWACV122AO	.000000	126	0.0000E+00	1.0000E+00
294	IWACV124AO	.000000	126	0.0000E+00	1.0000E+00

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

Reduced S:~ of Cutsets 2.428E-06

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
1	5.55E-07	22.86	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP	INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
2	5.55E-07	22.86	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP	INITIATING EVENT		4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			IWN-MAN00C				5.00E-01	IWN-MAN00C
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
3	2.60E-07	10.71	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
4	1.88E-07	7.74	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
5	1.30E-07	5.35	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT	5.00E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			PRN-MAN01				5.00E-01	PRN-MAN01
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
6	9.66E-08	3.98	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT LOGIC GROUPS			1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
7	9.42E-08	3.88	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			PRN-MAN01				5.00E-01	PRN-MAN01
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
8	6.65E-08	2.74	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
9	4.83E-08	1.99	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
10	2.47E-08	1.02	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT LOGIC GROUPS			1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
11	1.81E-08	.75	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			DUE TO CCF OF	THE SQUIB VALVES TO OPERATE			3.00E-05	ADX-EV-SA

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME	EVENT PROB	IDENTIFIER
12	1.62E-04	67	LOSS OF CCS/SWS WITH RCS FILLED INITIATING EVENT OCCURS	3.75E-03	IEV-COMD
			FAILURE OF MANUAL DAS ACTUATION	5.00E-01	REC-MANUAL
			CCF OF THE POWER INTERFACE OUTPUT BOARDS IN PMS	8.62E-06	CCX EF-3AM
13	1.57E-04	65	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023	2.60E-05	INX MV-G04
14	1.55E-04	64	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			REC-MANDAS COMMON MODE (FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			FAILURE OF INPUT LOGIC GROUPS	1.03E-04	CCX INPUT-LOGIC
			OPERATOR FAILS TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	ADR-MAN01
15	1.42E-04	58	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			ORIFICE FAILURE DUE TO PLUGGING	9.46E-05	IN2GR16DSPK
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IMN-MAN00
			COND PROB OF RHR-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHR-MAN05C
16	1.42E-04	58	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			COND PROB OF REC-MANDAS (FAILURE OF MANUAL DAS ACT.	5.00E-01	RPC-MANDASC
			ORIFICE FAILURE DUE TO PLUGGING	9.46E-05	IN2GR16DSPK
			OPERATOR FAILS TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	ADR-MAN01
17	1.42E-04	58	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			COND PROB OF REC-MANDAS (FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE DUE TO PLUGGING	9.46E-05	IN2GR17DSPK
			OPERATOR FAILS TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	ADR-MAN01
18	1.42E-04	58	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			ORIFICE FAILURE DUE TO PLUGGING	9.46E-05	IN2GR17DSPK
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IMN-MAN00
			COND PROB OF RHR-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHR-MAN05C
19	1.39E-04	57	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			CCF OF ACTUATION LOGIC GROUPS	4.63E-05	CCX PMAMXD1X
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RHR-MAN05
20	1.29E-04	53	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			CCF OF ACTUATION LOGIC GROUPS	8.54E-05	CCX PMAMXD2X
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IMN-MAN00
			COND PROB OF RHR-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHR-MAN05C
21	1.03E-04	42	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			LEVEL TRANSMITTER FAILURE	8.44E-05	IN2TLI40NFK
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IMN-MAN00
			COND PROB OF RHR-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHR-MAN05C
22	1.03E-04	42	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			LEVEL TRANSMITTER FAILURE	8.44E-05	IN2TLI70NFK
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IMN-MAN00
			COND PROB OF RHR-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHR-MAN05C
23	1.03E-04	42	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-COMD
			COND PROB OF REC-MANDAS (FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			LEVEL TRANSMITTER FAILURE	8.44E-05	IN2TLI70NFK
			OPERATOR FAILS TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	ADR-MAN01

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
24	1.03E-08	42	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT	5.00E-01	REC-MANDASC
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
25	9.03E-09	37	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
26	7.80E-09	32	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS FILLED	1.71E-02	IEV-LOSPND
			OFFSITE	AC POWER	RECOVERED IN	2 HOURS	7.60E-01	SUC-R2S
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-07	REC-MANDAS
27	7.22E-09	30	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IWX-FL-GP
28	5.19E-09	21	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
29	4.29E-09	18	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
30	4.15E-09	17	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF LOGIC	GROUP PROCESSING			1.38E-05	CCX-PMA030X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
31	4.14E-09	17	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT OCCURS		9.61E-04	IEV-RNSND
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
32	3.90E-09	16	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF INPUT	LOGIC GROUPS			2.59E-05	CCX-INPUT-LOGICX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
33	3.90E-09	16	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
34	3.77E-09	16	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
35	3.31E-09	14	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.10E-05	CCX-PMAMOD1-SW
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
36	3.09E-09	13	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE	AC POWER	RECOVERED IN	1 HOUR	5.80E-01	SUC-R1S
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW

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CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
37	2.60E-09	.11	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			PRN-MAN01				5.00E-01	PRN-MAN01
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
38	2.59E-09	.11	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
39	2.46E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS FILLED	1.71E-02	IEV-LOSPND
			FAILURE TO	RECOVER AC POWER	IN 2 HOURS		2.40E-01	OTH-R2
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
40	2.45E-09	.10	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			IWN-MAN00C				5.00E-01	IWN-MAN00C
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MODSS
41	2.45E-09	.10	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	2.21E-03	RN23MODSE
42	2.45E-09	.10	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
43	2.38E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
44	2.38E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
45	2.34E-09	.10	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE -	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
46	2.25E-09	.09	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
47	2.24E-09	.09	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
48	2.19E-09	.09	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
49	2.16E-09	.09	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC GROUP PROCESSING			1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
50	2.16E-09	.09	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC GROUP PROCESSING			1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
51	2.12E-09	.09	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023				2.60E-05	IWX-MV-GO1
52	2.10E-09	.09	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT LOGIC GROUPS			1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
53	1.93E-09	.08	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			COMMON MODE	FAILURE OF INPUT LOGIC GROUPS			1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS	DEPRESSURIZATION		5.00E-01	LPM-MAN05
54	1.93E-09	.08	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
55	1.93E-09	.08	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
56	1.93E-09	.08	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW1OR170SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
57	1.93E-09	.08	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW1OR170SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
58	1.89E-09	.08	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			CCF OF ACTUATION LOGIC GROUPS				4.63E-05	CCX-PMAMOD1X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
59	1.88E-09	.08	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			PRN-MAN01				5.00E-01	PRN-MAN01
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
60	1.75E-09	.07	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS			8.15E-05	IEV-RNSD
			CCF OF ACTUATION LOGIC GROUPS				8.58E-05	CCX-PMAMOD2X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
61	1.66E-09	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF SOFTWARE	FOR INPUT LOGIC	GROUPS		1.10F-05	CCX-IN-LOGIC-SW
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
62	1.66E-09	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF SOFTWARE	FOR ACTUATION	LOGIC GROUPS		1.10E-05	CCX-PMAMOD2-SW
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
63	1.58E-09	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
64	1.42E-09	.06	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
65	1.39E-09	.06	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW1TL170UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
66	1.39E-09	.06	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
67	1.39E-09	.06	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
68	1.39E-09	.06	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW1TL170UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
69	1.33E-09	.05	LOSS OF RNS WITH RCS FILLED		INITIATING EVENT OCCURS		9.61E-04	IEV-RNSND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
70	1.30E-09	.05	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
71	1.30E-09	.05	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
72	1.22E-09	.05	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
73	1.16E-09	.05	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
74	1.16E-09	.05	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
75	1.06E-09	.04	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
76	1.05E-09	.04	LOCA/RNS PIPE	RUPTURE WITH RCS FILLED INIT.		EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
77	9.78E-10	.04	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF STRAINERS	IN IRWST TANK			1.20E-05	IXX-FL-GP
78	9.66E-10	.04	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSMD
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
79	9.62E-10	.04	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	ZOX-PD-ES
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
80	9.60E-10	.04	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZOIMOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
81	8.85E-10	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		2.94E-06	CCX-EP-SAMX
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
82	8.57E-10	.04	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS		WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
83	8.44E-10	.03	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS		WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
84	8.44E-10	.03	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADH-MAN01
85	7.95E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	ZO2MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
86	7.90E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	BCX-CB-GC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
87	7.90E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	BCX-CB-GC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
88	7.59E-10	.03	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
89	7.22E-10	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
90	6.51E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
91	6.18E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD113
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
92	6.18E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD11
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
93	6.16E-10	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDSITM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
94	6.02E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD01/S

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME			EVENT PROB	IDENTIFIER
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE	2.02E-02	Z01MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os	2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
95	5.91E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS		2.00E-03	ZOX-PD-ES
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
96	5.85E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN	{#3.5}	1.23E-02	EC1CB100V0
			FAILURE OF	PMS OUTPUT	LOGIC I/Os	2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
97	5.77E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO OPEN	1.20E-03	ECX-CB-GO
			FAILURE OF INV.	STATIC SWITCH AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
98	5.77E-10	.02	LOSS OF RNS WITH RCS FILLED	INITIATING EVENT OCCURS		9.61E-04	IRV-RNSND
			SOFTWARE CCF	OF ALL CARDS		1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION	5.00E-01	REC-MANDAS
99	5.62E-10	.02	LOSS OF RNS WITH RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF LOGIC	GROUP PROCESSING		1.38E-05	CCX-PMA030X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
100	5.59E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS		2.00E-03	ZOX-PD-ES
			BUS UNAVAILABLE	DUE TO TEST OR CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDSITM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
101	5.46E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO START	2.97E-04	ZOX-DG-DS
			FAILURE OF	PMS OUTPUT	LOGIC I/Os	2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
102	5.33E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE	2.02E-02	Z01MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING	1.16E-03	PMA0301AGA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
103	5.33E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE	2.02E-02	Z01MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING	1.16E-03	PMA0301AGA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
104	5.31E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	BC13S121TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
105	5.31E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL MAINTENANCE		2.70E-03	BC1BS001TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
106	5.31E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	BC1BS012TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
107	5.28E-10	.02	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF INPUT	LOGIC GROUPS			2.59E-05	CCX-INPUT-LOGICX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
108	5.23E-10	.02	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
109	5.04E-10	.02	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
110	4.95E-10	.02	LOSS OF RNS WITH RCS FILLED		INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			COMMON MODE	FAILURE OF INPUT LOGIC GROUPS			1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
111	4.84E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	Z01MOD01
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	BC2CB200V0
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
112	4.84E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	BC1CB100V0
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	Z02MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
113	4.76E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
114	4.76E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
115	4.71E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			PMAMOD21X				1.16E-03	PMAMOD21X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
116	4.71E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			PMAMOD21X				1.16E-03	PMAMOD21X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
117	4.71E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			PMAMOD21X				1.16E-03	PMAMOD21X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
118	4.48E-10	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	9.15E-05	IEV-RNSD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.10E-05	CCX-PMAMOD1-SW
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
119	4.41E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTN-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	Z02MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
120	4.41E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	G2N-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	Z01MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO	CLOSE	2.02E-02	Z02MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
121	4.33E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			MECHANICAL	FAILURE CAUSES	MOV 121A TO	FAIL-TO-OPEN	3.00E-03	IRWMOD05S
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	7.40E-04	IWB-PLUG
122	4.33E-10	.02	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
123	4.33E-10	.02	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPN-MAN05
124	4.19E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
125	4.19E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05

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Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
126	4.19E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	RC1BS121TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
127	4.09E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
128	3.89E-10	.02	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			COND. PROB OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
129	3.67E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP C1B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			BREAKER 100	FAILS TO OPEN		[#3.5]	1.23E-02	RC1CB100VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
130	3.55E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	RCX-CB-GO
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
131	3.51E-10	.01	LOSS OF RNS WITH	RCS DRAINED	INITITING EVENT	OCCURS	8.15E-05	IEV-RNSD
			FAILURE OF	MANUAL DAS	ACTUAYION		5.00E-01	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
132	3.51E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	RCX-CB-GC
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
133	3.43E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD113
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
134	3.43E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD11
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
135	3.43E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD113
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05

Table 54B-9

CASE 4 LIST OF TOP 250 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
136	3.43E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	EDIMOD11
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
137	3.39E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.00E-05	ADX-EV-SA
138	3.36E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
139	3.34E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC & CB ECS21 SPO		1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
140	3.34E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC & CB ECS221 SPO		1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
141	3.33E-10	.01	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			IWN-MAN00C				5.00E-01	IWN-MAN00C
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
142	3.33E-10	.01	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			IWN-MAN00C				5.00E-01	IWN-MAN00C
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDK1TM
143	3.33E-10	.01	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	1.00E-04	IDDBSDD1TM
144	3.33E-10	.01	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			IWN-MAN00C				5.00E-01	IWN-MAN00C
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDD1TM
145	3.33E-10	.01	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDS1TM
146	3.33E-10	.01	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDDBSDK1TM

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CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
147	3.25E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
148	3.25E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
149	3.23E-10	.01	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-COWMD
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
150	3.10E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-COWD
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
151	3.03E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			DAS				1.00E-02	DAS
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			RC1OR195SP				7.22E-03	RC1OR195SP
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
152	3.03E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
153	3.03E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
154	2.96E-10	.01	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
155	2.95E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
156	2.94E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		2.60E-05	IWX-MV-GOI
157	2.91E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME	EVENT PROB	IDENTIFIER
158	2.89E-10	.01	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			BATTERY DB1 UNAVAILABLE	2.20E-03	ED1MOD01
			CCF OF OUTPUT LOGIC I/O BOARDS	1.41E-04	CCX-PMLMX01
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-MAN05
159	2.85E-10	.01	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF MANUAL DAS MANUAL DAS REACTOR TRIP HARDWARE	1.00E-02	MDAS
			ORIFICE FAILURE DUE TO PLUGGING BEFORE CORE DAMAGE	9.46E-05	IW1OR170SPK
			OPERATOR FAILS TO ACTUATE ADS	5.00E-01	ADS-MAN01
160	2.85E-10	.01	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF MANUAL DAS MANUAL DAS REACTOR TRIP HARDWARE	1.00E-02	MDAS
			ORIFICE FAILURE DUE TO PLUGGING BEFORE CORE DAMAGE	9.46E-05	IX2OR160SPK
			OPERATOR FAILS TO ACTUATE ADS	5.00E-01	ADS-MAN02
161	2.75E-10	.01	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			FAILURE OF PLS OUTPUT LOGIC I/Os	2.09E-03	PLSMOD11
			CCF OF OUTPUT LOGIC I/O BOARDS	1.41E-04	CCX-PMLMX01
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-MAN05
162	2.71E-10	.01	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			MECHANICAL FAILURE CAUSES MOV 121A TO FAIL-TO-OPEN	3.00E-03	IRNM30DGS
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE MAINTENANCE	3.00E-04	IDCRSED01TM
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-MAN05
163	2.71E-10	.01	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			MECHANICAL FAILURE CAUSES MOV 121A TO FAIL-TO-OPEN	3.00E-03	IRNM30DGS
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE MAINTENANCE	3.00E-04	IDCBS0K1TM
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-MAN05
164	2.71E-10	.01	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			MECHANICAL FAILURE CAUSES MOV 121A TO FAIL-TO-OPEN	3.00E-03	IRNM30DGS
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE MAINTENANCE	3.00E-04	IDCBSDSITM
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-MAN05
165	2.69E-10	.01	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			D/G FAILS TO START & RUN OR FAILS TO OPEN	2.02E-02	201M3001
			BREAKER 200 FAILURE UPON DEMAND OF LOGIC [#5.3]	1.23E-02	EC2CB260DVO
			GROUP PROCESSING	1.16E-03	PMA0301BGA
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-MAN05
166	2.69E-10	.01	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			BREAKER 100 FAILS TO OPEN [#3.5]	1.23E-02	EC1CB100DVO
			BKR 202 FAILS TO CLOSE	2.02E-02	202M3001
			D/G FAILS TO START & RUN OR GROUP PROCESSING	1.16E-03	PMA0301AGA
			DEMAND OF LOGIC		
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-MAN05
167	2.69E-10	.01	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			BREAKER 100 FAILS TO OPEN [#3.5]	1.23E-02	EC1CB100DVO
			BKR 202 FAILS TO CLOSE	2.02E-02	202M3001
			D/G FAILS TO START & RUN OR GROUP PROCESSING	1.16E-03	PMA0301BGA
			DEMAND OF LOGIC		
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RNS-ML05

Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME			EVENT PROB	IDENTIFIER
168	2.69E-10	.01	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE	2.02E-02	ZO1MOD01
			BREAKER 200	FAILS TO OPEN	[#5,3]	1.23E-02	EC2CB200V0
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING	1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
169	2.67E-10	.01	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			ORIFICE FAILURE	DUE TO PLUGGING		9.46E-05	IW10R170SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs	5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN RNS MOV V023)	5.00E-01	RHN-MAN05C
170	2.67E-10	.01	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS	WITH RCS DRAINED/	1.13E-05	IEV-LOCA24D
			ORIFICE FAILURE	DUE TO PLUGGING		9.46E-05	IW20R160SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs	5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN RNS MOV V023)	5.00E-01	RHN-MAN05C
171	2.67E-10	.01	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			COND. PROB. OF	REC-MANDAS	(FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING		9.46E-05	IW10R170SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE DAMAGE	5.00E-01	ADN-MAN01
172	2.67E-10	.01	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			COND. PROB. OF	REC-MANDAS	(FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING		9.46E-05	IW20R160SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE DAMAGE	5.00E-01	ADN-MAN01
173	2.66E-10	.01	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC			5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs	5.00E-01	IWN-MAN00
			IRWST DISCHARGE	LINE "B"	STRAINER PLUGGED	2.40E-04	IWB-PLUG
174	2.66E-10	.01	OVERDRAINING OF	RCS DURING DRAIN DOWN TO MID-LOOP INITIATING EVENT		4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE	5.00E-01	RHN-MAN04
			IWN-MAN00C			5.00E-01	IWN-MAN00C
			IRWST DISCHARGE	LINE "B"	STRAINER PLUGGED	2.40E-04	IWB-PLUG
175	2.63E-10	.01	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS		2.00E-03	ZOX-PD-ES
			CCF OF OUTPUT	LOGIC I/O BOARDS		1.41E-04	CCX-PMAMOD1
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
176	2.62E-10	.01	LOCA/RNS-V024	OPENS INITIATING EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF ACTUATION LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
177	2.58E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY OPENS		3.17E-04	IDAMOD04
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED MAINTENANCE	2.70E-03	EC1BS012TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
178	2.58E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER A07 SPURIOUSLY OPENS		3.17E-04	IDAMOD04
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL MAINTENANCE	2.70E-03	EC1BS001TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
179	2.58E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
180	2.56E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			COMMON CAUSE	FAILURE OF 4	AOVS TO OPEN		6.10E-05	CCX-AV-LA
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
181	2.56E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			COMMON CAUSE	FAILURE OF 4	AOVS TO OPEN		6.10E-05	CCX-AV-LA
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
182	2.53E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO RUN OF	ENGINE-DRIVEN	FUEL PUMPS		1.30E-04	ZOX-PD-ER
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
183	2.49E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			BREAKER 100	FAILS TO OPEN		[43,5]	1.23E-02	EC1CB100VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
184	2.44E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
185	2.44E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
186	2.44E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
187	2.42E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CCF OF ACTUATION	LOGIC GROUPS			8.58E-05	CCX-PMAMOD2X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
188	2.37E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
189	2.27E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S

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CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
190	2.27E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
191	2.27E-10	.01	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.00E-05	IWX-CV-AO
192	2.24E-10	.01	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF SOFTWARE	FOR ACTUATION	LOGIC GROUPS		1.10E-05	CCX-PMAMOD2-SW
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
193	2.24E-10	.01	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF SOFTWARE	FOR INPUT LOGIC	GROUPS		1.10E-05	CCX-IN-LOGIC-SW
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
194	2.20E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			DAS				1.00E-02	DAS
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			RC1TL195UF				5.23E-03	RC1TL195UF
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
195	2.16E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	RCX-CB-GC
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
196	2.14E-10	.01	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
197	2.14E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			COMMON CAUSE	FAILURE OF 4	CHECK VALVES TO	OPEN	5.10E-05	CMX-CV-GO
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
198	2.14E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			COMMON CAUSE	FAILURE OF 4	CHECK VALVES TO	OPEN	5.10E-05	CMX-CV-GO
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
199	2.12E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05

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Table 54B-9

CASE 4 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
200	2.06E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IWITL170UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01

Table 54B-10

BASIC EVENT IMPORTANCE - CASE 4

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SYSTEM UNAVAILABILITY (Q) =   2.428E-06
NUMBER OF BASIC EVENTS     =   295
NUMBER OF CUTSETS          =   6834
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BASIC EVENT		IMPORTANCE (%DECREASE)	NUMBER OF CUTSETS	DECREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1	RHN-MAN05C	49.06	27	1.1913E-06	5.0000E-01
2	IEV-RCSOD	46.11	484	1.1197E-06	4.4400E-06
3	REC-MANDASC	40.87	46	9.9237E-07	5.0000E-01
4	IEV-CCWND	33.07	69	8.0301E-07	3.7500E-03
5	LPM-MAN05	28.98	37	7.0373E-07	5.0000E-01
6	IWN-MAN00	26.41	189	6.4125E-07	5.0000E-01
7	RHN-MAN04	23.08	123	5.6057E-07	5.0000E-01
8	RHN-MAN04-SUCC	23.06	399	5.6003E-07	5.0000E-01
9	IWN-MAN00C	23.03	23	5.5933E-07	5.0000E-01
10	CCX-ORY-SP	19.34	18	4.6959E-07	2.7700E-04
11	CCX-XMTR195	13.99	16	3.3961E-07	2.0100E-04
12	ADN-MAN01	12.71	58	3.0853E-07	5.0000E-01
13	PRN-MAN01	9.42	4	2.2868E-07	5.0000E-01
14	IEV-CCWD	9.28	2122	2.2541E-07	6.0200E-04
15	IEV-RNSND	6.06	46	1.4711E-07	9.6100E-04
16	CCX-INPUT-LOGIC	5.90	29	1.4331E-07	1.0300E-04
17	RHN-MAN05	4.54	785	1.1034E-07	5.0000E-01
18	IEV-LOSPD	3.18	2450	7.7138E-08	4.4400E-03
19	OTH-R1	2.98	2292	7.2384E-08	4.2000E-01
20	REC-MANDAS	1.52	36	3.6991E-08	5.0000E-01
21	IW1OR170SPX	1.37	34	3.3302E-08	9.4600E-05
22	IW2OR160SPX	1.37	34	3.3302E-08	9.4600E-05
23	IEV-RNSD	1.25	1015	3.0296E-08	8.1500E-05
24	CCX-EP-SAM	1.02	218	2.4744E-08	8.6200E-06
25	IW1TL170UFX	.99	33	2.4133E-08	6.8400E-05
26	IW2TL160UFX	.99	33	2.4133E-08	6.8400E-05
27	ADX-EV-SA	.96	290	2.3311E-08	3.0000E-05
28	PMAMOD11	.96	296	2.3247E-08	2.0900E-03
29	MDAS	.85	79	2.0583E-08	1.0000E-02
30	IWX-MV-GO1	.84	266	2.0342E-08	2.6000E-05
31	CCX-SFTW	.80	26	1.9545E-08	1.2000E-06
32	CCX-PMAMOD1X	.67	195	1.6365E-08	4.6300E-05
33	CCX-PMAMOD2X	.62	22	1.5006E-08	8.5800E-05
34	ED1MOD03	.53	131	1.2948E-08	2.2020E-03
35	PMA0301ASA	.52	218	1.2643E-08	1.1600E-03
36	PMA0301BSA	.52	218	1.2643E-08	1.1600E-03
37	ZO1MOD01	.51	524	1.2300E-08	2.0200E-02
38	IWX-CV-AO	.49	395	1.1872E-08	3.0000E-05
39	ZOX-PD-ES	.49	113	1.1819E-08	2.0000E-03
40	IEV-LOSPND	.44	40	1.0762E-08	1.7100E-02
41	IWX-FL-GP	.39	168	9.5232E-09	1.2000E-05
42	SUC-R2S	.33	9	8.0530E-09	7.6000E-01
43	IEV-LOCA24ND	.31	121	7.6299E-09	1.6800E-05
44	ECX-CB-GO	.29	92	7.0988E-09	1.2000E-03
45	EC1CB100VO	.29	380	6.9747E-09	1.2300E-02
46	IDAMOD05	.28	354	6.7548E-09	5.1600E-04
47	RN23MOD5S	.24	917	5.7507E-09	2.2100E-03
48	CCX-PMA030X	.20	130	4.8587E-09	1.3800E-05
49	SUC-R1S	.20	158	4.7538E-09	5.8000E-01
50	SWBMOD02	.19	150	4.7168E-09	2.4400E-02
51	CCX-INPUT-LOGICX	.18	12	4.4596E-09	2.5900E-05
52	ECX-CB-GC	.18	74	4.2845E-09	7.3000E-04
53	IDAMOD04	.17	340	4.1872E-09	3.1700E-04
54	ZO2MOD01	.17	187	4.1301E-09	2.0200E-02
55	IEV-LOCA24D	.17	428	4.0509E-09	1.1300E-05
56	CCX-PMAMOD1-SW	.16	128	3.8978E-09	1.1000E-05
57	IDABSDS1TM	.16	255	3.8177E-09	3.0000E-04
58	IEV-LOCAPRND	.13	59	3.1838E-09	1.5100E-05
59	RNBMOD07S	.12	146	2.9939E-09	1.5300E-02
60	OTH-R2	.11	29	2.7091E-09	2.4000E-01
61	CCX-ORY-SPX	.11	112	2.7053E-09	3.6300E-06
62	EC1BS001TM	.11	442	2.6382E-09	2.7000E-03
63	EC1BS012TM	.11	442	2.6382E-09	2.7000E-03
64	EC1BS121TM	.11	442	2.6382E-09	2.7000E-03
65	ZOX-DG-DR	.11	57	2.5654E-09	4.4000E-04
66	EC2CB200VO	.10	144	2.3656E-09	1.2300E-02

67	CCX-PMAMOD1	.10	87	2.3206E-09	1.4100E-04
68	PMAMOD11X	.09	369	2.2001E-09	6.5300E-04
69	CCX-XMTRX	.08	97	1.9520E-09	2.6300E-06
70	IRWMOD05S	.08	380	1.9059E-09	3.0000E-03
71	CCX-IN-LOGIC-SW	.08	8	1.8961E-09	1.1000E-05
72	CCX-PMAMOD2-SW	.08	8	1.8961E-09	1.1000E-05
73	CCBMOD01S	.08	91	1.8833E-09	1.0400E-02
74	PL5MOD11	.08	73	1.8546E-09	2.0900E-03
75	ED1MOD11	.07	55	1.7935E-09	3.1700E-04
76	ED1MOD113	.07	55	1.7935E-09	3.1700E-04
77	PMAMOD21X	.07	14	1.6249E-09	1.1600E-03
78	ZOX-DG-DS	.07	50	1.6061E-09	2.8000E-04
79	ZO1DG001TM	.06	95	1.4801E-09	4.6000E-02
80	CCX-PMA030	.06	59	1.4742E-09	9.6900E-05
81	IWB-PLUG	.06	443	1.4174E-09	2.4000E-04
82	RHN-MAN03	.05	36	1.1106E-09	5.0000E-01
83	CCX-EP-SAMX	.04	87	1.0362E-09	2.9400E-06
84	PL50301ASA	.04	47	9.6705E-10	1.1600E-03
85	PL50301BSA	.04	47	9.6705E-10	1.1600E-03
86	CCX-BY-PN	.03	237	8.1154E-10	4.7000E-05
87	RNX-PM-FS	.03	50	7.8210E-10	7.7000E-04
88	IDDBSDD1TM	.03	370	7.7189E-10	3.0000E-04
89	IDDBSDK1TM	.03	370	7.7189E-10	3.0000E-04
90	IDDBSDS1TM	.03	370	7.7189E-10	3.0000E-04
91	ED2MOD03	.03	68	7.5987E-10	2.7000E-03
92	EC1REDG2GA	.03	57	7.4263E-10	4.3600E-03
93	ZOX-PD-ER	.03	32	7.0812E-10	1.3000E-04
94	RNX-KV-GO	.02	44	5.9576E-10	6.1000E-04
95	PMAXS00ASA	.02	28	5.6078E-10	8.0000E-05
96	PMA0301ASAX	.02	176	5.4451E-10	1.6500E-04
97	DAS	.02	4	5.3345E-10	1.0000E-02
98	PMA0301BSAX	.02	157	5.3061E-10	1.6500E-04
99	CCX-AV-LA	.02	5	5.2224E-10	6.1000E-05
100	CCB-MAN01	.02	6	5.1450E-10	5.0000E-01
101	IDCBSDD1TM	.02	176	4.7568E-10	3.0000E-04
102	IDCBSDK1TM	.02	176	4.7568E-10	3.0000E-04
103	IDCBSDS1TM	.02	176	4.7568E-10	3.0000E-04
104	RNDEP023SA	.02	291	4.3738E-10	1.7100E-04
105	CMX-CV-GO	.02	4	4.3656E-10	5.1000E-05
106	RNAMOD06S	.02	90	4.0233E-10	1.5300E-02
107	CCNTF101RI	.02	5	3.7355E-10	5.2300E-03
108	SWNTP001RI	.02	5	3.7355E-10	5.2300E-03
109	SWB-MAN02	.02	4	3.7350E-10	5.0000E-01
110	CCX-PMDMOD1	.01	270	3.5979E-10	1.4100E-04
111	ZO1MOD04	.01	82	3.4675E-10	1.2500E-03
112	ED1MOD01	.01	23	3.3742E-10	5.0400E-04
113	RC1OR195SP	.01	4	3.3587E-10	7.2200E-03
114	ED3MOD03	.01	35	3.3554E-10	2.2020E-03
115	CMX-VS-FA	.01	7	3.2865E-10	3.8400E-05
116	PMAMOD12X	.01	123	3.1897E-10	6.5300E-04
117	CCX-IV-XR	.01	132	3.0459E-10	2.4000E-05
118	PL4MOD11	.01	43	2.9430E-10	2.0900E-03
119	PL1MOD11	.01	36	2.9284E-10	2.0900E-03
120	PL7MOD11	.01	36	2.9284E-10	2.0900E-03
121	PMAXS00ASAX	.01	158	2.9216E-10	8.0000E-05
122	ZOX-BL-ES	.01	16	2.9153E-10	6.0000E-05
123	CCX-BY-PN1	.01	17	2.7939E-10	5.7000E-05
124	SWBMOD09P	.01	31	2.5840E-10	1.8500E-03
125	ZON-MAN01	.01	7	2.5070E-10	5.0000E-01
126	CCX-PMD030	.01	184	2.4527E-10	9.6900E-05
127	IWBCV122AO	.01	184	2.4081E-10	8.7600E-03
128	IWBCV123AO	.01	184	2.4081E-10	8.7600E-03
129	IWBCV124AO	.01	184	2.4081E-10	8.7600E-03
130	IWBCV125AO	.01	184	2.4081E-10	8.7600E-03
131	RC1TL195UF	.01	3	2.3779E-10	5.2300E-03
132	PMAMOD22X	.01	2	2.0389E-10	1.1600E-03
133	IDBBSDD1TM	.01	125	1.8655E-10	3.0000E-04
134	IDBBSDK1TM	.01	125	1.8655E-10	3.0000E-04
135	IDBBSDS1TM	.01	125	1.8655E-10	3.0000E-04
136	ED1MOD13	.01	17	1.6811E-10	3.1700E-04
137	ED1MOD07	.01	17	1.6183E-10	3.0500E-04
138	IDAMOD08	.01	96	1.5440E-10	3.1700E-04
139	IWA-PLUG	.01	136	1.5239E-10	2.4000E-04
140	ZO2MOD04	.01	44	1.5107E-10	1.2500E-03
141	PL40301ASA	.01	29	1.3152E-10	1.1600E-03
142	PL40301BSA	.01	26	1.3126E-10	1.1600E-03
143	PL10301ASA	.01	25	1.3097E-10	1.1600E-03
144	PL70301ASA	.01	25	1.3097E-10	1.1600E-03
145	PL10301BSA	.01	24	1.3091E-10	1.1600E-03
146	PL70301BSA	.01	24	1.30₇1E-10	1.1600E-03
147	CCX-PMDMOD4	.01	133	1.2412E-10	4.9800E-05

148	CCX-PMAMOD4	.00	41	1.1766E-10	4.9800E-05
149	IWACV122AO	.00	126	9.2456E-11	8.7600E-03
150	IWACV123AO	.00	126	9.2456E-11	8.7600E-03
151	IWACV124AO	.00	126	9.2456E-11	8.7600E-03
152	IWACV125AO	.00	126	9.2456E-11	8.7600E-03
153	IRAEP121BSAX	.00	66	9.0638E-11	5.8300E-05
154	PMA0302ASAX	.00	59	7.0115E-11	1.6500E-04
155	SWAMOD07	.00	42	6.9016E-11	7.1200E-03
156	ED3MOD07	.00	26	6.4578E-11	3.0500E-04
157	PMA0302BSAX	.00	40	5.6211E-11	1.6500E-04
158	PMDMOD11	.00	206	5.5612E-11	2.0900E-03
159	CCX-PL4MOD1	.00	17	5.4804E-11	1.4100E-04
160	CCAMOD02	.00	40	5.3178E-11	7.1000E-03
161	PL1MOD51	.00	2	4.5600E-11	8.7400E-04
162	EC1REDG1GA	.00	39	3.9569E-11	4.3600E-03
163	EC1MOD12	.00	66	3.6853E-11	4.8000E-05
164	ZO2DG002TM	.00	42	3.4976E-11	4.6000E-02
165	IRAEP121ASAX	.00	42	3.4265E-11	5.8300E-05
166	CCX-PL403	.00	14	3.3840E-11	9.6900E-05
167	IDAMOD06	.00	48	3.1916E-11	4.3200E-05
168	EC2BS002TM	.00	187	2.8167E-11	2.7000E-03
169	EC2BS022TM	.00	187	2.8167E-11	2.7000E-03
170	EC2BS221TM	.00	187	2.8167E-11	2.7000E-03
171	IDDFD019RQ	.00	58	2.7837E-11	1.2000E-05
172	IDDFD020RQ	.00	58	2.7837E-11	1.2000E-05
173	EC5EPMGB1SA	.00	9	2.6790E-11	1.7100E-04
174	CCX-PMDMOD1-SW	.00	56	2.5532E-11	1.1000E-05
175	CCX-PMDMOD4-SW	.00	56	2.5532E-11	1.1000E-05
176	CCX-PMAMOD4-SW	.00	12	2.4547E-11	1.1000E-05
177	CCX-PL1MOD1	.00	9	2.2094E-11	1.4100E-04
178	CCX-PL7MOD1	.00	9	2.2094E-11	1.4100E-04
179	IDAMOD02	.00	31	2.0373E-11	2.7000E-03
180	IDAMOD03	.00	31	2.0373E-11	2.7000E-03
181	RNX-CV-GO	.00	12	1.7721E-11	5.1000E-05
182	PMDMOD12	.00	86	1.6617E-11	2.0900E-03
183	IDCFD007RQ	.00	18	1.6478E-11	1.2000E-05
184	IDCFD008RQ	.00	18	1.6478E-11	1.2000E-05
185	PMD0301ASA	.00	134	1.6126E-11	1.1600E-03
186	CCX-PL103	.00	7	1.5111E-11	9.6900E-05
187	CCX-PL703	.00	7	1.5111E-11	9.6900E-05
188	PMD0301BSA	.00	117	1.4531E-11	1.1600E-03
189	CCX-LS-FA	.00	32	1.3597E-11	5.3700E-06
190	IDABSDS1LF	.00	24	1.3369E-11	4.8000E-06
191	PXX-AV-LA	.00	57	1.2491E-11	6.1000E-05
192	PL5XS00ASA	.00	7	1.2481E-11	8.0000E-05
193	ED2MOD01	.00	1	1.2200E-11	5.0400E-04
194	EC1MOD121	.00	24	1.1563E-11	1.6800E-05
195	IDDBSDD1LF	.00	31	1.1056E-11	4.8000E-06
196	IDDBSDK1LF	.00	31	1.1056E-11	4.8000E-06
197	IDDBSDS1LF	.00	31	1.1056E-11	4.8000E-06
198	SWAMOD09P	.00	22	1.0838E-11	1.8500E-03
199	CCX-PMDEH0	.00	29	9.2710E-12	4.0300E-06
200	CCX-PMAEHOX	.00	11	8.9933E-12	4.0300E-06
201	PMAMOD41	.00	34	8.2206E-12	6.3500E-04
202	ALL-IND-FAIL	.00	27	7.3394E-12	1.0000E-06
203	AD2MOD01	.00	21	6.8895E-12	5.5400E-02
204	AD2MOD02	.00	21	6.8895E-12	5.5400E-02
205	AD3MOD03	.00	21	6.8895E-12	5.5400E-02
206	AD3MOD04	.00	21	6.8895E-12	5.5400E-02
207	PMDMOD41	.00	67	6.5833E-12	6.3500E-04
208	IDAMOD07	.00	15	6.3711E-12	2.1900E-02
209	RNX-PM-ER	.00	10	5.4562E-12	1.6000E-05
210	IDBFD013RQ	.00	10	5.2583E-12	1.2000E-05
211	IDBFD014RQ	.00	10	5.2583E-12	1.2000E-05
212	IDDMOD33	.00	45	4.9614E-12	5.1600E-04
213	IDCBSDD1LF	.00	12	4.9550E-12	4.8000E-06
214	IDCBSDK1LF	.00	12	4.9550E-12	4.8000E-06
215	IDCBSDS1LF	.00	12	4.9550E-12	4.8000E-06
216	PMD0302ASA	.00	46	4.9095E-12	1.1600E-03
217	CCX-PM-ER	.00	10	4.7707E-12	1.4000E-05
218	SWX-PM-ER	.00	10	4.7707E-12	1.4000E-05
219	IDDMOD32	.00	58	4.6906E-12	3.1700E-04
220	ED2MOD11	.00	20	4.3133E-12	3.1700E-04
221	CCX-IV-XR1	.00	6	3.7030E-12	2.4000E-05
222	CCX-PL4MOD1-SW	.00	8	3.6009E-12	1.1000E-05
223	PMD0302BSA	.00	29	3.3148E-12	1.1600E-03
224	ED3MOD01	.00	10	3.2503E-12	5.0400E-04
225	CCX-EP-SA	.00	8	2.8215E-12	8.6200E-06
226	EC1MOD01	.00	16	2.6423E-12	2.0200E-04
227	PL4MOD12	.00	16	2.6108E-12	2.0900E-03
228	EC1BS001LF	.00	7	2.1584E-12	4.8000E-06

229	EC2MOD01	.00	14	2.0179E-12	2.0200E-04
230	IDDMOD38	.00	31	1.6623E-12	3.1700E-04
231	CCX-PL1MOD1-SW	.00	4	1.5710E-12	1.1000E-05
232	CCX-PL7MOD1-SW	.00	4	1.5710E-12	1.1000E-05
233	ZANMOD01	.00	8	1.3746E-12	8.4000E-05
234	RNAEPRNPSA	.00	9	1.3107E-12	1.7100E-04
235	RNBEPRNPSA	.00	9	1.3107E-12	1.7100E-04
236	SW7EPSBPASA	.00	7	1.1083E-12	1.7100E-04
237	PL1MOD12	.00	7	1.0618E-12	2.0900E-03
238	PL7MOD12	.00	7	1.0618E-12	2.0900E-03
239	DG2-LOGIC	.00	1	9.6501E-13	5.0000E-33
240	PL40302ASA	.00	7	8.6231E-13	1.1600E-03
241	ADX-MV-GO	.00	4	8.1246E-13	1.1000E-03
242	IDBBSDD1LF	.00	7	8.0913E-13	4.8000E-06
243	IDBBSDK1LF	.00	7	8.0913E-13	4.8000E-06
244	IDBBSDS1LF	.00	7	8.0913E-13	4.8000E-06
245	PMDXS00ASA	.00	32	7.8704E-13	8.0000E-05
246	PMDEH0A1SA	.00	28	7.7849E-13	8.0000E-05
247	CC1EPSBPASA	.00	6	7.6561E-13	1.7100E-04
248	ZO1MOD03	.00	8	7.3574E-13	1.0000E-04
249	PMAEH0A1SAX	.00	6	7.2342E-13	8.0000E-05
250	PMAMOD42	.00	4	6.7402E-13	6.3500E-04
251	CC1EPSBPBSA	.00	5	6.3893E-13	1.7100E-04
252	SW7EPSBPBSA	.00	5	6.3893E-13	1.7100E-04
253	ED1BSDS1LF	.00	3	6.0907E-13	4.8000E-06
254	PL40302BSA	.00	4	6.0296E-13	1.1600E-03
255	SW7EPCTFASA	.00	4	5.7998E-13	1.7100E-04
256	SW7EPCTFBSA	.00	4	5.7998E-13	1.7100E-04
257	ED3BSDS1TM	.00	1	4.8805E-13	3.0000E-04
258	PMDMOD42	.00	11	4.8650E-13	6.3500E-04
259	IWNTK001AF	.00	5	4.7595E-13	2.4000E-06
260	ZO2MOD03	.00	5	4.3032E-13	1.0000E-04
261	PRAAV108LA	.00	11	3.5461E-13	1.0900E-03
262	PRBAV108LA	.00	11	3.5461E-13	1.0900E-03
263	PL10302ASA	.00	3	3.1919E-13	1.1600E-03
264	PL70302ASA	.00	3	3.1919E-13	1.1600E-03
265	CCX-BC-SA	.00	5	2.8222E-13	8.4000E-06
266	PL10302BSA	.00	2	2.5402E-13	1.1600E-03
267	PL70302BSA	.00	2	2.5402E-13	1.1600E-03
268	CCX-HE-AF	.00	3	2.3115E-13	1.2000E-06
269	PL1XS00ASA	.00	3	2.1649E-13	8.0000E-05
270	PL4XS00ASA	.00	3	2.1649E-13	8.0000E-05
271	PL7XS00ASA	.00	3	2.1649E-13	8.0000E-05
272	CCX-XMTR	.00	3	1.9007E-13	2.0100E-04
273	PLMMOD41	.00	2	1.7897E-13	6.3500E-04
274	EC2MOD22	.00	17	1.5954E-13	4.8000E-05
275	PRAAV108TM	.00	9	1.5754E-13	5.0000E-04
276	PRBAV108TM	.00	9	1.5754E-13	5.0000E-04
277	CCX-TRNSM	.00	2	1.0192E-13	2.0100E-04
278	EC1MOD13	.00	2	9.6145E-14	4.8000E-05
279	SC2MOD23	.00	2	9.6145E-14	4.8000E-05
280	DG1-LOGIC	.00	1	9.0039E-14	5.0000E-03
281	ZOX-BL-ER	.00	1	6.5947E-14	1.3600E-06
282	ZOX-FL-GP	.00	1	6.2950E-14	1.3000E-06
283	IDDMOD21	.00	6	4.9960E-14	1.9200E-03
284	IDABSDD1TM	.00	3	2.4980E-14	3.0000E-04
285	IDABSDK1TM	.00	3	2.4980E-14	3.0000E-04
286	PRX-HR-ML	.00	4	2.3759E-14	1.2000E-07
287	PMDEH0A2SA	.00	10	1.7431E-14	8.0000E-05
288	IDDMOD34	.00	10	1.2101E-14	4.3200E-05
289	PRCEP108SA	.00	1	1.0547E-14	1.7100E-04
290	PRDEP108SA	.00	1	1.0547E-14	1.7100E-04
291	IDDMOD35	.00	4	5.7732E-15	2.1900E-02
292	EC2MOD221	.00	3	1.3323E-15	1.6800E-05
293	IWX XMTRLW	.00	2	1.2212E-15	9.2000E-09
294	IDDMOD22	.00	3	9.9920E-16	2.7000E-03
295	IDDMOD23	.00	3	9.9920E-16	2.7000E-03

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         SYSTEM UNAVAILABILITY (Q) =   2.428E-06
         NUMBER OF BASIC EVENTS   =   295
         NUMBER OF CUTSETS        =   6834
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	BASIC EVENT	IMPORTANCE (%INCREASE)	NUMBER OF CUTSETS	INCREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1	IEV-RCSOD	1.038544E+07	484	2.5219E-01	4.4400E-06
2	CCX-SFTW	670744.	26	1.6288E-02	1.2000E-06
3	CCX-EP-SAM	118210.	218	2.8705E-03	8.6200E-06
4	CCX-ORY-SP	69793.3	18	1.6948E-03	2.7700E-04
5	CCX-XMTR195	69565.5	16	1.6893E-03	2.0100E-04
6	CCX-INPUT-LOGIC	57292.4	29	1.3912E-03	1.0300E-04
7	IWX-FL-GP	32680.4	168	7.9359E-04	1.2000E-05
8	IWX-MV-GO1	32218.1	264	7.8236E-04	2.6000E-05
9	ADX-EV-SA	31997.7	290	7.7701E-04	3.0000E-05
10	CCX-ORY-SPX	30690.2	112	7.4526E-04	6.3000E-06
11	CCX-XMTRX	30564.2	97	7.4220E-04	2.6300E-06
12	IEV-LOCA24ND	18702.3	121	4.5415E-04	1.6800E-05
13	IWX-CV-AO	16295.7	395	3.9571E-04	3.0000E-05
14	IEV-CCWD	15410.1	2122	3.7421E-04	6.0200E-04
15	IEV-RNSD	15306.8	1015	3.7170E-04	8.1500E-05
16	IEV-LOCA24D	14762.5	428	3.5848E-04	1.1300E-05
17	CCX-PMAMOD1-SW	14591.9	128	3.5434E-04	1.1000E-05
18	CCX-PMAMOD1X	14555.2	195	3.5345E-04	4.6300E-05
19	IW1TL170UFX	14528.4	33	3.5280E-04	6.8400E-05
20	IW2TL160UFX	14528.6	33	3.5280E-04	6.8400E-05
21	CCX-EP-SAMX	14514.1	87	3.5245E-04	2.9400E-06
22	CCX-PMA030X	14498.7	130	3.5207E-04	1.3800E-05
23	IW1OR170SPX	14495.4	34	3.5200E-04	9.4600E-05
24	IW2OR160SPX	14495.4	34	3.5200E-04	9.4600E-05
25	IEV-CCWND	8785.20	69	2.1333E-04	3.7500E-03
26	IEV-LOCAPRND	8682.60	59	2.1084E-04	1.5100E-05
27	CCX-PMAMOD2X	7201.47	22	1.7488E-04	8.5800E-05
28	CCX-IN-LOGIC-SW	7098.28	8	1.7237E-04	1.1000E-05
29	CCX-PMAMOD2-SW	7098.28	8	1.7237E-04	1.1000E-05
30	CCX-INPUT-LOGICX	7090.53	12	1.7218E-04	2.5900E-05
31	IEV-RNSND	6297.81	46	1.5293E-04	9.6100E-04
32	IEV-LOSPD	712.270	2450	1.7296E-05	4.4400E-03
33	CCX-BY-PN	711.023	237	1.7266E-05	4.7000E-05
34	CCX-PMAMOD1	677.652	87	1.6456E-05	1.4100E-04
35	CCX-PMA030	626.452	59	1.5212E-05	9.6900E-05
36	IDAMOD04	543.770	340	1.3205E-05	3.1700E-04
37	IDAMOD05	538.807	354	1.3084E-05	5.1600E-04
38	IDABSDS1TM	523.898	255	1.2722E-05	3.0000E-04
39	CCX-IV-XR	522.623	132	1.2691E-05	2.4000E-05
40	PMAMOD11	457.098	296	1.1100E-05	2.0900E-03
41	PMA0301ASA	448.329	218	1.0887E-05	1.1600E-03
42	PMA0301BSA	448.329	218	1.0887E-05	1.1600E-03
43	CCX-AV-LA	352.539	5	8.5608E-06	6.1000E-05
44	CMX-CV-GO	352.488	4	8.5596E-06	5.1000E-05
45	CMX-VS-FA	352.435	7	8.5583E-06	3.8400E-05
46	ALL-IND-FAIL	302.239	27	7.3393E-06	1.0000E-06
47	PMAXS00ASA	288.640	28	7.0091E-06	8.0000E-05
48	ECX-CB-GO	243.320	32	5.9086E-06	1.2000E-03
49	IWB-PLUG	243.147	443	5.9044E-06	2.4000E-04
50	ZOX-PD-ES	242.873	113	5.8978E-06	2.0000E-03
51	ED1MOD03	241.621	131	5.8673E-06	2.2020E-03
52	X-CB-GC	241.522	74	5.8649E-06	7.3000E-04
53	-DG-DR	240.001	57	5.8280E-06	4.4000E-04
54	G-DS	236.150	50	5.7345E-06	2.8000E-04
55	OD11	232.916	55	5.6560E-06	3.1700E-04
56	OD113	232.916	55	5.6560E-06	3.1700E-04
57	ZOX-PD-ER	224.284	32	5.4464E-06	1.3000E-04
58	CCX-BY-PN1	201.842	17	4.9014E-06	5.7000E-05
59	ZOX-BL-ES	200.080	16	4.8586E-06	6.0000E-05
60	PMAXS00ASAX	150.379	158	3.6517E-06	8.0000E-05
61	PMAMOD11X	138.654	369	3.3670E-06	6.5300E-04
62	PMA0301ASAX	135.876	176	3.2995E-06	1.6500E-04
63	PMA0301BSAX	132.406	157	3.2153E-06	1.6500E-04
64	IDABSDS1LF	114.699	24	2.7853E-06	4.8000E-06
65	RN23MOD5S	106.921	917	2.5964E-06	2.2100E-03
66	IDDBSDD1TM	105.925	370	2.5722E-06	3.0000E-04
67	IDDBSDK1TM	105.925	370	2.5722E-06	3.0000E-04
68	IDDBSDS1TM	105.925	370	2.5722E-06	3.0000E-04
69	RNDEP023SA	105.312	291	2.5573E-06	1.7100E-04
70	CCX-PMDMOD1	105.065	270	2.5513E-06	1.4100E-04
71	CCX-LS-FA	104.271	32	2.5320E-06	5.3700E-06
72	CCX-PMD030	104.225	184	2.5309E-06	9.6900E-05

73	CCX-PMDMOD4	102.635	133	2.4923E-06	4.9800E-05
74	CCX-PMAMOD4	97.2944	41	2.3676E-06	4.9800E-05
75	CCX-PMDMOD1-SW	95.5630	56	2.3211E-06	1.1000E-05
76	CCX-PMDMOD4-SW	95.5830	56	2.3218E-06	1.1000E-05
77	IDDFD019RQ	95.5274	58	2.3197E-06	1.2000E-05
78	IDDFD020RQ	95.5274	58	2.3197E-06	1.2000E-05
79	IDDBSDD1LF	94.8507	31	2.3033E-06	4.8000E-06
80	IDDBSDK1LF	94.8507	31	2.3033E-06	4.8000E-06
81	IDDBSDS1LF	94.8507	31	2.3033E-06	4.8000E-06
82	CCX-PMDEHO	94.7358	25	2.3005E-06	4.0300E-06
83	CCX-PMAEHOX	91.8973	11	2.2316E-06	4.0300E-06
84	CCX-PMAMOD4-SW	91.6955	12	2.231 -06	1.1000E-05
85	MDAS	83.9156	79	2.0377E-06	1.0000E-02
86	IDCBSDD1TM	65.2765	176	1.5851E-06	3.0000E-04
87	IDCBSDK1TM	65.2765	176	1.5851E-06	3.0000E-04
88	IDCBSDS1TM	65.2765	176	1.5851E-06	3.0000E-04
89	IRAEP121BSAX	64.0193	66	1.5546E-06	5.8300E-05
90	PMAMOD21X	57.6193	14	1.3992E-06	1.1600E-03
91	IDCFD007RQ	56.5473	18	1.3732E-06	1.2000E-05
92	IDCFD008RQ	56.5473	18	1.3732E-06	1.2000E-05
93	RHN-MAN05C	49.0570	27	1.1913E-06	5.0000E-01
94	IDCBSDD1LF	42.5105	12	1.0323E-06	4.8000E-06
95	IDCBSDK1LF	42.5105	12	1.0323E-06	4.8000E-06
96	IDCBSDS1LF	42.5105	12	1.0323E-06	4.8000E-06
97	RNX-PM-FS	41.7955	50	1.0149E-06	7.7000E-04
98	REC-MANDASC	40.8664	46	9.9237E-07	5.0000E-01
99	RNX-KV-GO	40.1945	44	9.7505E-07	6.1000E-04
100	EC1BS001TM	40.1297	442	9.7448E-07	2.7000E-03
101	EC1BS012TM	40.1297	442	9.7448E-07	2.7000E-03
102	EC1BS121TM	40.1297	442	9.7448E-07	2.7000E-03
103	PL5MOD11	36.4662	73	8.8552E-07	2.0900E-03
104	PL50301ASA	34.2910	47	8.3270E-07	1.1600E-03
105	PL50301BSA	34.2910	47	8.3270E-07	1.1600E-03
106	EC1MOD12	31.6155	66	7.6773E-07	4.8000E-05
107	IDAMOD06	30.4224	48	7.3875E-07	4.3200E-05
108	LPM-MAN05	28.9799	37	7.0373E-07	5.0000E-01
109	EC1MOD121	28.3430	24	6.8826E-07	1.6800E-05
110	ED1MOD01	27.5556	23	6.6914E-07	5.0400E-04
111	IWN-MAN00	26.4069	189	6.4125E-07	5.0000E-01
112	IWA-PLUG	26.1420	136	6.3481E-07	2.4000E-04
113	IRWMOD05S	26.0833	380	6.3339E-07	3.0000E-03
114	IDBBSDD1TM	25.5997	125	6.2164E-07	3.0000E-04
115	IDBBSDK1TM	25.5997	125	6.2164E-07	3.0000E-04
116	IDBBSDS1TM	25.5997	125	6.2164E-07	3.0000E-04
117	IEV-LOSPND	25.4745	40	6.1860E-07	1.7100E-02
118	ZO1MOD01	24.5691	524	5.9662E-07	2.0200E-02
119	IRAEP121ASAX	24.2017	42	5.8770E-07	5.8300E-05
120	RHN-MAN04	23.0847	123	5.6057E-07	5.0000E-01
121	EC1CB100VO	23.0642	380	5.6007E-07	1.2300E-02
122	RHN-MAN04-SUCC	23.0625	399	5.6003E-07	5.0000E-01
123	IWN-MAN00C	23.0336	23	5.5933E-07	5.0000E-01
124	ED1MOD07	21.8434	17	5.3043E-07	3.0500E-04
125	ED1MOD13	21.8313	17	5.3014E-07	3.1700E-04
126	PMAMOD12X	20.1023	123	4.8815E-07	6.5300E-04
127	IDAMOD06	20.0513	96	4.8691E-07	3.1700E-04
128	EC1BS001LF	18.5173	7	4.4966E-07	4.8000E-06
129	IDBFD013RQ	18.0450	10	4.3819E-07	1.2000E-05
130	IDBFD014RQ	18.0450	10	4.3819E-07	1.2000E-05
131	PMA0302ASAX	17.4963	59	4.2487E-07	1.6500E-04
132	CCX-PL4MOD1	16.0040	17	3.8863E-07	1.4100E-04
133	CCX-PL403	14.3798	14	3.4919E-07	9.6900E-05
134	RNX-CV-GO	14.3087	12	3.4746E-07	5.1000E-05
135	RNX-PM-ER	14.0429	10	3.4101E-07	1.6000E-05
136	CCX-PM-ER	14.0328	10	3.4076E-07	1.4000E-05
137	SWX-PM-ER	14.0328	10	3.4076E-07	1.4000E-05
138	PMA0302BSAX	14.0269	40	3.4062E-07	1.6500E-04
139	CCX-PL4MOD1-SW	13.4805	8	3.2735E-07	1.1000E-05
140	CCX-EP-SA	13.4792	8	3.2732E-07	8.6200E-06
141	ADN MAN01	12.7054	58	3.0853E-07	5.0000E-01
142	ED2MOD03	11.5583	68	2.8067E-07	2.7000E-03
143	ZO1MOD04	11.4092	82	2.7705E-07	1.2500E-03
144	PRN-MAN01	9.41718	4	2.2868E-07	5.0000E-01
145	ED3MOD07	8.71659	26	2.1167E-07	3.0500E-04
146	PXX-AV-LA	8.43237	57	2.0477E-07	6.1000E-05
147	ZO2MOD01	8.24963	187	2.0033E-07	2.0200E-02
148	IWNTK001AF	8.16666	5	1.9831E-07	2.4000E-06
149	PRX-HR-ML	8.15334	4	1.9799E-07	1.2000E-07
150	RNBMOD07S	7.93486	146	1.9268E-07	1.5300E-02
151	CCX HE-AF	7.93235	3	1.9262E-07	1.2000E-06
152	EC2CB200VO	7.82260	144	1.8996E-07	1.2300E-02
153	SWBMOD02	7.76650	150	1.8860E-07	2.4400E-02

154	CCBMOD01S	7.37986	91	1.7921E-07	1.0400E-02
155	PMAMOD22X	7.22998	2	1.7557E-07	1.1600E-03
156	EC1REDG2GA	6.98365	57	1.6959E-07	4.3600E-03
157	IDBBSDD1LF	6.94174	7	1.6857E-07	4.8000E-06
158	IDBBSDK1LF	6.94174	7	1.6857E-07	4.8000E-06
159	IDBBSDS1LF	6.94174	7	1.6857E-07	4.8000E-06
160	CCX-PL1MOD1	6.45198	9	1.5668E-07	1.4100E-04
161	CCX-PL7MOD1	6.45198	9	1.5668E-07	1.4100E-04
162	EC5EPMGB1SA	6.45042	9	1.5664E-07	1.7100E-04
163	PL5XS00ASA	6.42419	7	1.5600E-07	8.0000E-05
164	CCX-PL103	6.42127	7	1.5593E-07	9.6900E-05
165	CCX-PL703	6.42127	7	1.5593E-07	9.6900E-05
166	CCX-IV-XR1	6.35374	6	1.5429E-07	2.4000E-05
167	ED3MOD03	6.26126	35	1.5204E-07	2.2020E-03
168	CCX-PL1MOD1-SW	5.88115	4	1.4281E-07	1.1000E-05
169	CCX-PL7MOD1-SW	5.88115	4	1.4281E-07	1.1000E-05
170	PL4MOD11	5.78667	43	1.4052E-07	2.0900E-03
171	PL1MOD11	5.75793	36	1.3982E-07	2.0900E-03
172	PL7MOD11	5.75793	36	1.3982E-07	2.0900E-03
173	SWBMOD09P	5.74125	31	1.3942E-07	1.8500E-03
174	IWX-XMTRLW	5.46648	2	1.3274E-07	9.2000E-09
175	ED1BSDS1LF	5.22535	3	1.2689E-07	4.8000E-06
176	ZO2MOD04	4.97060	44	1.2070E-07	1.2500E-04
177	PL40301ASA	4.66350	29	1.1324E-07	1.1600E-03
178	PL40301BSA	4.65430	26	1.1302E-07	1.1600E-03
179	PL10301ASA	4.64424	25	1.1278E-07	1.1600E-03
180	PL70301ASA	4.64424	25	1.1278E-07	1.1600E-03
181	PL10301BSA	4.64193	24	1.1272E-07	1.1600E-03
182	PL70301BSA	4.64193	24	1.1272E-07	1.1600E-03
183	RHN-MAN05	4.54369	785	1.1034E-07	5.0000E-01
184	OTH-R1	4.11637	2292	9.9959E-08	4.2000E-01
185	CCNTF101RI	2.92593	5	7.1051E-08	5.2300E-03
186	SWNTP001RI	2.92593	5	7.1051E-08	5.2300E-03
187	DAS	2.17481	4	5.2812E-08	1.0000E-02
188	PL1MOD51	2.14668	2	5.2128E-08	8.7400E-04
189	ZOX-BL-ER	1.99687	1	4.8491E-08	1.3600E-06
190	ZOX-FL-GP	1.99408	1	4.8423E-08	1.3000E-06
191	RC1OR195SP	1.90187	4	4.6184E-08	7.2200E-03
192	RC1TL195UF	1.86255	3	4.5229E-08	5.2300E-03
193	REC-MANDAS	1.52332	36	3.6991E-08	5.0000E-01
194	CCX-BC-SA	1.38355	5	3.3597E-08	8.4000E-06
195	ZO1DG001TM	1.26406	95	3.0696E-08	4.6700E-02
196	IWBCV122AO	1.12213	184	2.7249E-08	8.7600E-03
197	IWBCV123AO	1.12213	184	2.7249E-08	8.7600E-03
198	IWBCV124AO	1.12213	184	2.7249E-08	8.7600E-03
199	IWBCV125AO	1.12213	184	2.7249E-08	8.7600E-03
200	PMDMOD11	1.09347	206	2.6553E-08	2.0900E-03
201	RNAMOD06S	1.06633	90	2.5894E-08	1.5300E-02
202	ED2MOD01	.996332	1	2.4198E-08	5.0400E-04
203	ZANMOD01	.673819	8	1.6363E-08	8.4000E-05
204	IDDMOD32	.609148	58	1.4792E-08	3.1700E-04
205	PMD0301ASA	.571805	134	1.3885E-08	1.1600E-03
206	ED2MOD11	.560155	20	1.3602E-08	3.1700E-04
207	EC1MOD01	.538568	16	1.3078E-08	2.0200E-04
208	PMAMOD41	.532782	34	1.2938E-08	6.3500E-04
209	PMD0301BSA	.515257	117	1.2512E-08	1.1600E-03
210	IWACV122AO	.430828	126	1.0462E-08	8.7600E-03
211	IWACV123AO	.430828	126	1.0462E-08	8.7600E-03
212	IWACV124AO	.430828	126	1.0462E-08	8.7600E-03
213	IWACV125AO	.430828	126	1.0462E-08	8.7600E-03
214	EC2BS002TM	.428441	187	1.0404E-08	2.7000E-03
215	EC2BS022TM	.428441	187	1.0404E-08	2.7000E-03
216	EC2BS221TM	.428441	187	1.0404E-08	2.7000E-03
217	PMDMOD41	.426664	67	1.0361E-08	6.3500E-04
218	EC2MOD01	.411303	14	9.9878E-09	2.0200E-04
219	PMDXS00ASA	.405101	32	9.8372E-09	8.0000E-05
220	PMDEH0A1SA	.400701	28	9.7303E-09	8.0000E-05
221	SWAMOD07	.396334	42	9.6243E-09	7.1200E-03
222	IDDMOD33	.395749	45	9.6101E-09	5.1600E-04
223	PMAEH0A1SAX	.372357	6	9.0420E-09	8.0000E-05
224	EC1REDG1GA	.361699	39	8.8075E-09	4.3600E-03
225	OTH-R2	.353274	29	8.5787E-09	2.4000E-01
226	PMDMOD12	.326736	86	7.9342E-09	2.0900E-03
227	RNAEPRNPSA	.315399	9	7.6638E-09	1.7100E-04
228	RNBEPRNPSA	.315399	9	7.6638E-09	1.7100E-04
229	IDAMOD02	.309896	31	7.5253E-09	2.7000E-03
230	IDAMOD03	.309896	31	7.5253E-09	2.7000E-03
231	CCAMOD02	.306247	40	7.4367E-09	7.1000E-03
232	ZO1MOD03	.302914	8	7.3567E-09	1.0000E-04
233	SW7EPSBPASA	.266866	7	6.4804E-09	1.7100E-04
234	ED3MOD01	.265433	10	6.4457E-09	5.0400E-04

235	SWAMOD09P	.240805	22	5.8475E-09	1.8500E-03
236	IDDMOD38	.215881	31	5.2423E-09	3.1700E-04
237	CC1EPSBPASA	.184344	6	4.4765E-09	1.7100E-04
238	ZO2MOD03	.177192	5	4.3028E-09	1.0000E-04
239	PMD0302ASA	.174088	46	4.2274E-09	1.1600E-03
240	CC1EPSBPBSA	.153843	5	3.7358E-09	1.7100E-04
241	SW7EPSBPBSA	.153843	5	3.7358E-09	1.7100E-04
242	SUC-R1S	.141760	158	3.4424E-09	5.8000E-01
243	SW7EPCTFASA	.139648	4	3.3911E-09	1.7100E-04
244	SW7EPCTFBSA	.139648	4	3.3911E-09	1.7100E-04
245	EC2MOD22	.136867	17	3.3236E-09	4.8000E-05
246	PMD0302BSA	.117540	29	2.8543E-09	1.1600E-03
247	PL1XS00ASA	.111433	3	2.7060E-09	8.0000E-05
248	PL4XS00ASA	.111433	3	2.7060E-09	8.0000E-05
249	PL7XS00ASA	.111433	3	2.7060E-09	8.0000E-05
250	SUC-R2S	.104724	9	2.5430E-09	7.6000E-01
251	EC1MOD13	8.248194E-02	2	2.0029E-09	4.8000E-05
252	EC2MOD23	8.248194E-02	2	2.0029E-09	4.8000E-05
253	ED3BSDS1TM	6.697445E-02	1	1.6264E-09	3.0000E-04
254	PL4MOD12	5.133477E-02	16	1.2466E-09	2.0900E-03
255	RHN-MAN03	4.573561E-02	36	1.1106E-09	5.0000E-01
256	PMAMOD42	4.368313E-02	4	1.0608E-09	6.3500E-04
257	CCX-XMTR	3.893350E-02	3	9.4543E-10	2.0100E-04
258	PMDMOD42	3.153014E-02	11	7.6565E-10	6.3500E-04
259	PL40302ASA	3.057696E-02	7	7.4251E-10	1.1600E-03
260	ADX-MV-GO	3.038259E-02	4	7.3779E-10	1.1000E-03
261	ZG2DG002TM	2.987156E-02	42	7.2538E-10	4.6000E-02
262	PL40302BSA	2.138065E-02	4	5.1919E-10	1.1600E-03
263	CCB-MAN01	2.118743E-02	6	5.1450E-10	5.0000E-01
264	PL1MOD12	2.087794E-02	7	5.0698E-10	2.0900E-03
265	PL7MOD12	2.087794E-02	7	5.0698E-10	2.0900E-03
266	CCX-TNSM	2.087673E-02	2	5.0696E-10	2.0100E-04
267	SWB-MA302	1.538096E-02	4	3.7350E-10	5.0000E-01
268	PRAAV108LA	1.338252E-02	11	3.2497E-10	1.0900E-03
269	PRBAV108LA	1.338252E-02	11	3.2497E-10	1.0900E-03
270	PRAAV108TM	1.296875E-02	9	3.1492E-10	5.0000E-04
271	PRBAV108TM	1.296875E-02	9	3.1492E-10	5.0000E-04
272	IDAMOD07	1.171786E-02	15	2.8455E-10	2.1900E-02
273	PLMMOD41	1.159895E-02	2	2.8166E-10	6.3500E-04
274	IDDMOD34	1.153525E-02	10	2.8011E-10	4.3200E-05
275	PL10302ASA	1.131824E-02	3	2.7484E-10	1.1600E-03
276	PL70302ASA	1.131824E-02	3	2.7484E-10	1.1600E-03
277	IDDMOD21	1.071349E-02	6	2.6016E-10	1.9200E-04
278	ZON-MAN01	1.032399E-02	7	2.5070E-10	5.0000E-01
279	PL10302BSA	9.007351E-03	2	2.1873E-10	1.1600E-03
280	PL70302BSA	9.007351E-03	2	2.1873E-10	1.1600E-03
281	PMDEH0A2SA	8.971768E-03	10	2.1786E-10	8.0000E-05
282	DG2-LOGIC	7.908168E-03	1	1.9204E-10	5.0000E-03
283	AD2MOD01	4.837467E-03	21	1.1747E-10	5.5400E-02
284	AD2MOD02	4.837467E-03	21	1.1747E-10	5.5400E-02
285	AD3MOD03	4.837467E-03	21	1.1747E-10	5.5400E-02
286	AD3MOD04	4.837467E-03	21	1.1747E-10	5.5400E-02
287	IDABSDD1TM	3.427946E-03	3	8.3242E-11	3.0000E-04
288	IDABSDK1TM	3.427946E-03	3	8.3242E-11	3.0000E-04
289	EC2MOD221	3.265636E-03	3	7.9300E-11	1.6800E-05
290	PRCEP108SA	2.539547E-03	1	6.1669E-11	1.7100E-04
291	PRDEP108SA	2.539547E-03	1	6.1669E-11	1.7100E-04
292	DG1-LOGIC	7.378652E-04	1	1.7918E-11	5.0000E-03
293	IDDMOD22	1.519874E-05	3	3.6908E-13	2.7000E-03
294	IDDMOD23	1.519874E-05	3	3.6908E-13	2.7000E-03
295	IDDMOD35	1.061807E-05	4	2.5784E-13	2.1900E-02

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Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

Reduced Sum of Cutsets: 6.196E-06

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
1	1.11E-06	17.91	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			IWN-MAN00C				5.00E-01	IWN-MAN00C
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
2	1.11E-06	17.91	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
3	5.55E-07	8.96	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			OPERATOR FAILS	TO ISOLATE	RNS PIPE RUPTURE		5.00E-01	RHN-MAN04
			IWN-MAN00C				5.00E-01	IWN-MAN00C
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
4	5.55E-07	8.96	OVERDRAINING OF	RCS DURING DRAIN	DOWN TO MID-LOOP	INITIATING EVENT	4.44E-06	IEV-RCSOD
			RHN-MAN04-SUCC				5.00E-01	RHN-MAN04-SUCC
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
5	2.60E-07	4.20	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
6	1.88E-07	3.03	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
7	1.81E-07	2.92	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDD1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
8	1.81E-07	2.92	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDK1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
9	1.81E-07	2.92	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
10	1.44E-07	2.32	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME		EVENT PROB	IDENTIFIER
11	1.30E-07	2.10	LOSS OF CCS/SWS	WITH RCS FILLED INITIATING EVENT OCCURS	3.75E-03	IEV-CCWRD
			COND. PROB. OF REC-MANDAS	(FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF ORIFICES		2.77E-04	CCX-ORY-SP
			PRN-MAN01	TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	PRN-MAN01
			OPERATOR FAILS		5.00E-01	ADN-MAN01
12	9.66E-08	1.56	LOSS OF CCS/SWS	WITH RCS FILLED INITIATING EVENT OCCURS	3.75E-03	IEV-CCWRD
			COND. PROB. OF REC-MANDAS	(FAILURE OF MANUAL DAS ACT	5.00E-01	REC-MANDASC
			COMMON MODE FAILURE OF INPUT LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS DEPRESSURIZATION	5.00E-01	LPM-MAN05
13	9.42E-08	1.52	LOSS OF CCS/SWS	WITH RCS FILLED INITIATING EVENT OCCURS	3.75E-03	IEV-CCWRD
			COND. PROB. OF REC-MANDAS	(FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE TRANSMITTERS		2.01E-04	CCX-XMTR195
			PRN-MAN01	TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	PRN-MAN01
			OPERATOR FAILS		5.00E-01	ADN-MAN01
14	9.03E-08	1.46	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE 122A	FAILS TO OPEN	1.00E+00	IWACV122AO
			CHECK VALVE 124A	FAILS TO OPEN	1.00E+00	IWACV124AO
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDR1TM
			OPERATOR FAILS TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
15	9.03E-08	1.46	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE 122A	FAILS TO OPEN	1.00E+00	IWACV122AO
			CHECK VALVE 124A	FAILS TO OPEN	1.00E+00	IWACV124AO
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDD1TM
			OPERATOR FAILS TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
16	9.03E-08	1.45	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE 122A	FAILS TO OPEN	1.00E+00	IWACV122AO
			CHECK VALVE 124A	FAILS TO OPEN	1.00E+00	IWACV124AO
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDS1TM
			OPERATOR FAILS TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
17	6.65E-08	1.07	LOSS OF RNS WITH RCS FILLED	INITIATING EVENT OCCURS	9.61E-04	IEV-RNSRD
			COND. PROB. OF REC-MANDAS	(FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF ORIFICES		2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS DEPRESS...IZATION	5.00E-01	LPM-MAN05
18	4.83E-08	.78	LOSS OF RNS WITH RCS FILLED	INITIATING EVENT OCCURS	9.61E-04	IEV-RNSRD
			COND. PROB. OF REC-MANDAS	(FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE TRANSMITTERS		2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS DEPRESSURIZATION	5.00E-01	LPM-MAN05
19	3.51E-08	.57	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE 122A	FAILS TO OPEN	1.00E+00	IWACV122AO
			CHECK VALVE 124A	FAILS TO OPEN	1.00E+00	IWACV124AO
			FAILURE OF POWER INTERFACE OUTPUT BOARD		5.83E-05	IRAEP121BSAX
			MECHANICAL	MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23M0DS
20	2.85E-08	.46	LOSS OF CCS/SWS	WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			ORIFICE FAILURE DUE TO PLUGGING	IRWST MOVs	9.46E-05	IW1OR170SPX
			OPERATOR FAILS TO OPEN TWO	MOV 023 TO	1.00E-01	INN-MAN00
			MECHANICAL FAILURE CAUSES	FAIL-TO-OPEN	1.00E+00	RN23M0DS

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
21	2.85E-08	.46	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
22	2.79E-08	.45	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
23	2.58E-08	.42	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			8.58E-05	CCX-PMAMOD2X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
24	2.47E-08	.40	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT OCCURS		9.61E-04	IEV-RNSND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
25	2.45E-08	.40	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSID1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
26	2.45E-08	.40	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
27	2.45E-08	.40	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDK1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
28	2.29E-08	.37	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			DUE TO CCF OF	THE SQUIB VALVES	TO OPERATE		3.80E-05	ADX-EV-SA
29	2.29E-08	.37	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF IRWST INJ	MOVs 121A, 121B,	& RNS V023		3.80E-05	IWX-MV-GO1
30	2.06E-08	.33	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
31	2.06E-08	.33	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW1TL170UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
32	1.96E-08	.32	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
33	1.87E-08	.30	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.10E-05	IWX-CV-AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	.N23MOD5S
34	1.75E-08	.28	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	.WACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			FAILURE OF POWER	INTERFACE OUTPUT	BOARD		5.83E-05	:RAEP121BSAX
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
35	1.62E-08	.26	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
36	1.55E-08	.25	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
37	1.42E-08	.23	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW1OR170SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
38	1.42E-08	.23	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
39	1.42E-08	.23	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
40	1.42E-08	.23	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW1OR170SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
41	1.39E-08	.22	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
42	1.29E-08	.21	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ACTUATION	LOGIC GROUPS			8.58E-05	CCX-PMAMOD2X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
43	1.22E-08	.20	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDK1TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
44	1.22E-08	.20	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDCBSDS1TM
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME	EVENT PROB	IDENTIFIER
45	1.22E-08	.20	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	6.15E-05	IEV-RNSD
			CHECK VALVE 122A FAILS TO OPEN	1.00E+00	IWACV122AO
			CHECK VALVE 124A FAILS TO OPEN	1.00E+00	IWACV124AO
			BUS UNAVAILABLE DUE TO TEST OR CORRECTIVE MAINTENANCE	3.00E-04	IDCBSDD1TM
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
46	1.03E-08	.17	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			LEVEL TRANSMITTER FAILURE	6.84E-05	IW1TL170UFX
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			COND. PROB. OF RHN-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHN-MAN05C
47	1.03E-08	.17	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			COND. PROB. OF REC-MANDAS (FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			LEVEL TRANSMITTER FAILURE	6.84E-05	IW2TL160UFX
			OPERATOR FAILS TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	ADN-MAN01
48	1.03E-08	.17	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			COND. PROB. OF REC-MANDAS (FAILURE OF MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			LEVEL TRANSMITTER FAILURE	6.84E-05	IW1TL170UFX
			OPERATOR FAILS TO ACTUATE ADS BEFORE CORE DAMAGE	5.00E-01	ADN-MAN01
49	1.03E-08	.17	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			LEVEL TRANSMITTER FAILURE	6.84E-05	IW2TL160UFX
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			COND. PROB. OF RHN-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHN-MAN05C
50	9.33E-09	.15	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CCF OF GRAVITY INJECTION CHECK VALVES TO OPEN	3.10E-05	IWX-CV-AO
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
51	8.58E-09	.14	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			BATTERY DB1 UNAVAILABLE	2.20E-03	ED1MOD03
			FAILURE OF PMS OUTPUT LOGIC I/Os	2.09E-03	PMAMOD11
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
52	8.31E-09	.13	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CCF OF LOGIC GROUP PROCESSING	1.38E-05	CCX-PMA030X
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
53	7.80E-09	.13	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS FILLED	1.71E-02	IEV-LOSPND
			OFFSITE AC POWER RECOVERED IN 2 HOURS	7.60E-01	SUC-R2S
			SOFTWARE CCF OF ALL CARDS	1.20E-06	CCX-SFTW
			FAILURE OF MANUAL DAS ACTUATION	5.00E-01	REC-MANDAS
54	7.80E-09	.13	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CCF OF INPUT LOGIC GROUPS	2.59E-05	CCX-INPUT-LOGICX
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
55	7.79E-09	.13	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			CCF TO START OF ENGINE-DRIVEN FUEL PUMPS	2.00E-03	ZOX-PD-ES
			FAILURE OF PMS OUTPUT LOGIC I/Os	2.09E-03	PMAMOD11
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
56	7.22E-09	.12	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CCF OF STRAINERS IN IRWST TANK	1.20E-05	IWX-FL-GP

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
57	6.62E-09	.11	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.10E-05	CCX-PMAMOD1-SW
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
58	5.19E-09	.08	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
59	4.76E-09	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
60	4.76E-09	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
61	4.68E-09	.08	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
62	4.33E-09	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
63	4.33E-09	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
64	4.29E-09	.07	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
65	4.15E-09	.07	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF LOGIC	GROUP PROCESSING			1.38E-05	CCX-PMA030X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
66	4.14E-09	.07	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
67	4.03E-09	.07	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.58E-05	IEV-LOCA24ND
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME	EVENT PROB	IDENTIFIER
68	3.90E-09	.06	LOSS (CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CCF OF INPUT LOGIC GROUPS	2.59E-05	CCX-INPUT-LOGICX
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			COND. PROB. OF RHN-MAN05 (OP. FAILS TO OPEN RNS MOV V023)	5.00E-01	RHN-MAN05C
69	3.90E-09	.06	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO RECOVER AC POWER IN 1 HOUR	4.20E-01	OTH-R1
			CCF TO START OF ENGINE-DRIVEN FUEL PUMPS	2.00E-03	ZOX-PD-ES
			FAILURE OF PMS OUTPUT LOGIC I/Os	2.09E-03	PMAMOD11
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
70	3.85E-09	.06	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	8.15E-05	IEV-RNSD
			ORIFICE FAILURE DUE TO PLUGGING	9.46E-05	IW1OR170SPX
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
71	3.85E-09	.06	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	8.15E-05	IEV-RNSD
			ORIFICE FAILURE DUE TO PLUGGING	9.46E-05	IW2OR160SPX
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
72	3.77E-09	.06	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	8.15E-05	IEV-RNSD
			CCF OF ACTUATION LOGIC GROUPS	4.63E-05	CCX-PMAMOD1X
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
73	3.77E-09	.06	LOSS OF CU S WITH RCS FILLED INITIATING EVENT OCCURS	3.75E-03	IEV-CCWND
			FAILURE OF MANUAL DAS REACTOR TRIP HARDWARE	1.00E-02	MDAS
			CCF OF PRESSURE TRANSMITTERS	2.01E-04	CCX-XMTR155
			OPERATOR FAILS TO RECOGNIZE THE NEED FOR RCS DEPRESSURIZATION	5.00E-01	LPM-MAN05
74	3.50E-09	.06	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	8.15E-05	IEV-RNSD
			CCF OF ACTUATION LOGIC GROUPS	8.58E-05	CCX-PMAMOD2X
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
75	3.31E-09	.05	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CCF OF SOFTWARE FOR ACTUATION LOGIC GROUPS	1.10E-05	CCX-PMAMOD2-SW
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
76	3.31E-09	.05	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			CCF OF SOFTWARE FOR INPUT LOGIC GROUPS	1.10E-05	CCX-IN-LOGIC-SW
			OPERATOR FAILS TO OPEN TWO IRWST MOVs	5.00E-01	IWN-MAN00
			MECHANICAL FAILURE CAUSES MOV 023 TO FAIL-TO-OPEN	1.00E+00	RN23MOD5S
77	3.31E-09	.05	LOSS OF CCS/SWS WITH RCS DRAINED INITIATING EVENT OCCURS	6.02E-04	IEV-CCWD
			SOFTWARE CCF OF OUTPUT LOGIC I/Os	1.10E-05	CCX-PMAMOD1-SW
			OPERATOR FAILS TO RECOGNIZE NEED AND TO OPEN RNS MOV V023	5.00E-01	RHN-MAN05
78	3.10E-09	.05	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	8.15E-05	IEV-RNSD
			DUE TO CCF OF THE SQUIB VALVES TO OPERATE	3.80E-05	ADX-EV-SA
79	3.10E-09	.05	LOSS OF RNS WITH RCS DRAINED INITIATING EVENT OCCURS	8.15E-05	IEV-RNSD
			CCF OF IRWST INJ MOVs 121A, 121B, & RNS V023	3.80E-05	IWX-MV-GO1
80	3.09E-09	.05	LOSS OF OFFSITE POWER INITIATING EVENT OCCURS WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			OFFSITE AC POWER RECOVERED IN 1 HOUR	5.80E-01	SUC-R1S
			SOFTWARE CCF OF ALL CARDS	1.20E-06	CCX-SFTW

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
81	2.85E-09	.05	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
82	2.79E-09	.05	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
83	2.79E-09	.05	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW1TL170UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
84	2.71E-09	.04	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS DRAINED	1.13E-05	IEV-LOCA24D
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
85	2.60E-09	.04	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			PRN-MAN01				5.00E-01	PRN-MAN01
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
86	2.60E-09	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
87	2.60E-09	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
88	2.59E-09	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		8.62E-06	CCX-EP-SAM
89	2.53E-09	.04	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.10E-05	IWX-CV-AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
90	2.46E-09	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS FILLED	1.71E-02	IEV-LOSPND
			FAILURE TO	RECOVER AC POWER	IN 2 HOURS		2.40E-01	OTH-R2
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
91	2.38E-09	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	EDIMOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
92	2.38E-09	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
93	2.34E-09	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
94	2.25E-09	.04	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			SOFTWARE CCF	OF ALL CARLS			1.20E-06	CCX-SFTW
			FAILURE OF	MANUAL DAS	ACTUATION		5.00E-01	REC-MANDAS
95	2.24E-09	.04	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
96	2.19E-09	.04	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF ORIFICES				3.63E-06	CCX-ORY-SPX
97	2.16E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
98	2.16E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN FUEL PUMPS			2.00E-03	ZOX-PD-ES
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
99	2.12E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE OF INV.	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
100	2.10E-09	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
101	1.93E-09	.03	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT OCCURS		3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			COMMON MODE	FAILURE OF INPUT	LOGIC GROUPS		1.03E-04	CCX-INPUT-LOGIC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
102	1.93E-09	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR170SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
103	1.93E-09	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW1OR170SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
104	1.93E-09	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR160SPX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
105	1.93E-09	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			ORIFICE FAILURE	DUE TO PLUGGING			9.46E-05	IW2OR169SPX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
106	1.92E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	- WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
107	1.92E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
108	1.89E-09	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF ACTUATION	LOGIC GROUPS			4.63E-05	CCX-PMAMOD1X
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHH-MAN05
109	1.88E-09	.03	LOSS OF CCS/SWS	WITH RCS FILLED	INITIATING EVENT	OCCURS	3.75E-03	IEV-CCWND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			PRN-MAN01				5.00E-01	PRN-MAN01
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
110	1.84E-09	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			CHECK VALVE	122B	FAILS TO OPEN		1.75E-03	IWBCV122AO
			CHECK VALVE	124B	FAILS TO OPEN		1.75E-03	IWBCV124AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
111	1.81E-09	.03	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			OPERATOR FAILS	TO ISOLATE	RMS PIPE RUPTURE		5.00E-01	RHN-MAN04
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWS-PLUG
112	1.77E-09	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		2.94E-06	CCX-EP-SAMX
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
113	1.75E-09	.03	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF ACTUATION	LOGIC GROUPS			8.58E-05	CCX-PMAMOD2X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
114	1.71E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
115	1.66E-09	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF SOFTWARE	FOR INPUT LOGIC	GROUPS		1.10E-05	CCX-IN-LOGIC-SW
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
116	1.66E-09	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF SOFTWARE	FOR ACTUATION	LOGIC GROUPS		1.10E-05	CCX-PMAMOD2-SW
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
117	1.59E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
118	1.58E-09	.03	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CCF OF PRESSURE	TRANSMITTERS			2.63E-06	CCX-XMTRX
119	1.58E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-QC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
120	1.58E-09	.03	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-QC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
121	1.42E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-QC
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	DEMAND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
122	1.39E-09	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
123	1.39E-09	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW1TL170UFX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			COND. PROB. OF	RHN-MAN05 (OP.	FAILS TO OPEN	RNS MOV V023)	5.00E-01	RHN-MAN05C
124	1.39E-09	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IW2TL160UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
125	1.39E-09	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			LEVEL	TRANSMITTER	FAILURE		6.84E-05	IWITL170UFX
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
126	1.33E-09	.02	LOSS OF RNS WITH	RCS FILLED	INITIATING EVENT	OCCURS	9.61E-04	IEV-RNSND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
127	1.30E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
128	1.30E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-01	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
129	1.30E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-01	ECX-CB-GO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
130	1.26E-09	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF GRAVITY	INJECTION CHECK	VALVES TO OPEN		3.10E-05	IWX-CV-AO
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
131	1.24E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
132	1.24E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
133	1.23E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
134	1.20E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

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Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
135	1.18E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
136	1.17E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
137	1.16E-09	.02	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
138	1.16E-09	.02	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
139	1.15E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
140	1.12E-09	.02	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			CCF OF LOGIC	GROUP PROCESSING			1.38E-05	CCX-PMA030X
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
141	1.12E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
142	1.09E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
143	1.07E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
144	1.07E-09	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

Table 54B-11

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
145	1.06E-09	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL MAINTENANCE		2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
146	1.06E-09	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
147	1.06E-09	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		6.53E-04	PMAMOD11X
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
148	1.06E-09	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
149	1.06E-09	.02	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF INPUT	LOGIC GROUPS			2.59E-05	CCX-INPUT-LOGICX
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
150	1.05E-09	.02	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF ORIFICES				2.77E-04	CCX-ORY-SP
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05
151	9.86E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			IRWST DISCHARGE	LINE "B"	STRAINER	PLUGGED	2.40E-04	IWB-PLUG
152	9.78E-10	.02	LOSS OF RNS WITH RCS DRAINED		INITIATING EVENT OCCURS		8.15E-05	IEV-RNSD
			CCF OF STRAINERS IN IRWST TANK				1.20E-05	IWX-FL-GP
153	9.68E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			BREAKER 200	FAILS TO OPEN		[#5,3]	1.23E-02	EC2CB200VO
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
154	9.68E-10	.02	LOSS OF OFFSITE	POWER INITIATING EVENT OCCURS	WITH RCS DRAINED		4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER IN 1 HOUR			4.20E-01	OTH-R1
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
155	9.66E-10	.02	LOSS OF RNS WITH RCS FILLED		INITIATING EVENT OCCURS		9.61E-04	IEV-RNSND
			FAILURE OF	MANUAL DAS	REACTOR TRIP	HARDWARE	1.00E-02	MDAS
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE NEED FOR RCS		DEPRESSURIZATION	5.00E-01	LPM-MAN05

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
156	9.62E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			CCF TO START	OF ENGINE-DRIVEN	FUEL PUMPS		2.00E-03	ZOX-PD-ES
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
157	9.60E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
158	9.52E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
159	9.52E-10	.02	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
160	9.43E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			PMAMOD21X				1.16E-03	PMAMOD21X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
161	9.43E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			PMAMOD21X				1.16E-03	PMAMOD21X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
162	9.43E-10	.02	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			PMAMOD21X				1.16E-03	PMAMOD21X
			OPERATOR FAILS	TO OPEN TWO	IRWST MOVs		5.00E-01	IWN-MAN00
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
163	9.22E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			CHECK VALVE	122B	FAILS TO OPEN		1.75E-03	IWBCV122AO
			CHECK VALVE	124B	FAILS TO OPEN		1.75E-03	IWBCV124AO
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
164	8.97E-10	.01	LOSS OF RNS WITH	RCS DRAINED	INITIATING EVENT	OCCURS	8.15E-05	IEV-RNSD
			SOFTWARE CCF OF	OUTPUT LOGIC	I/Os		1.10E-05	CCX-PMAMOD1-SW
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
165	8.85E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			CCF OF THE POWER	INTERFACE OUTPUT	BOARDS IN PMS		2.94E-06	CCX-EP-SAMX
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05

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CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
166	8.83E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
167	8.83E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
168	8.57E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	RUN	4.40E-04	ZOX-DG-DR
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
169	8.44E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
170	8.44E-10	.01	LOCA/RNS-V024	OPENS INITIATING	EVENT OCCURS	WITH RCS FILLED	1.68E-05	IEV-LOCA24ND
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			OPERATOR FAILS	TO ACTUATE ADS	BEFORE CORE	DAMAGE	5.00E-01	ADN-MAN01
171	8.39E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS012TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
172	8.39E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			UNAVAILABILITY	OF BUS ECS ES 1	DUE TO UNSCHEDUL	MAINTENANCE	2.70E-03	EC1BS001TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
173	8.39E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-CCWD
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			BUS UNAVAILABLE	DUE TO	UNSCHEDULED	MAINTENANCE	2.70E-03	EC1BS121TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
174	8.19E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP SUBLOOP B	HARDWARE FAILURE	OR DIVERTED FLOW		1.04E-02	CCBMOD01S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
175	7.95E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			D/G FAILS TO	START & RUN OR	BKR 202 FAILS TO CLOSE		2.02E-02	ZO2MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05

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CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
176	7.90E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
177	7.90E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
178	7.59E-10	.01	LOCA/RNS PIPE	RUPTURE WITH RCS	FILLED INIT.	EVENT OCCURS	1.51E-05	IEV-LOCAPRND
			COND. PROB. OF	REC-MANDAS	(FAILURE OF	MANUAL DAS ACT.	5.00E-01	REC-MANDASC
			CCF OF PRESSURE	TRANSMITTERS			2.01E-04	CCX-XMTR195
			OPERATOR FAILS	TO RECOGNIZE THE	NEED FOR RCS	DEPRESSURIZATION	5.00E-01	LPM-MAN05
179	7.33E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B PTC & RE PTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100V0
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
180	7.22E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT	OCCURS	6.02E-04	IEV-COWD
			SOFTWARE CCF	OF ALL CARDS			1.20E-06	CCX-SFTW
181	7.09E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
182	7.02E-10	01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKER TO	CLOSE	7.30E-04	ECX-CB-GC
			FAILURE OF INV.,	STATIC SWITCH	AND ASSOC.	BREAKERS	5.16E-04	IDAMOD05
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
183	6.86E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
184	6.86E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
185	6.86E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
186	6.86E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
187	6.71E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	4KV BREAKERS TO	OPEN	1.20E-03	ECX-CB-GO
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS1TM
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
188	6.69E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
189	6.69E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO	CLOSE	2.02E-02	ZO1MOD01
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
190	6.51E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAIN	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			LOSS OF DIST.	PANEL OR BREAKER	A07 SPURIOUSLY	OPENS	3.17E-04	IDAMOD04
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
191	6.49E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
192	6.49E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP MP 01B	SEGMENT HARDWARE	FAILURE OR	DIVERTED FLOW	2.44E-02	SWBMOD02
			BREAKER 100	FAILS TO OPEN		[#3,5]	1.23E-02	EC1CB100VO
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
193	6.18E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD113
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05
194	6.18E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			FIXED	COMPONENTS	FAILURE		3.17E-04	ED1MOD11
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN	RNS MOV V023	5.00E-01	RHN-MAN05

CASE 5 LIST OF TOP 200 DOMINANT CUTSETS

NUMBER	CUTSET PROB	PERCENT	BASIC EVENT NAME				EVENT PROB	IDENTIFIER
195	6.16E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			BATTERY	DB1	UNAVAILABLE		2.20E-03	ED1MOD03
			BUS UNAVAILABLE	DUE TO TEST OR	CORRECTIVE	MAINTENANCE	3.00E-04	IDABSDS17M
			OPERATOR FAILS	TO RECOGNIZE	EED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05
196	6.11E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			CHECK VALVE	122B	FAILS TO OPEN		1.75E-03	IWBCV122AO
			CHECK VALVE	125B	FAILS TO OPEN		5.80E-04	IWBCV125AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
197	6.11E-10	.01	LOSS OF CCS/SWS	WITH RCS DRAINED	INITIATING EVENT OCCURS		6.02E-04	IEV-CCWD
			CHECK VALVE	122A	FAILS TO OPEN		1.00E+00	IWACV122AO
			CHECK VALVE	124A	FAILS TO OPEN		1.00E+00	IWACV124AO
			CHECK VALVE	123B	FAILS TO OPEN		5.80E-04	IWBCV123AO
			CHECK VALVE	124B	FAILS TO OPEN		1.75E-03	IWBCV124AO
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
198	6.06E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301ASA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
199	6.06E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			COMMON CAUSE	FAILURE	STANDBY DG TO	START	2.80E-04	ZOX-DG-DS
			FAILURE UPON	DEMAND OF LOGIC	GROUP PROCESSING		1.16E-03	PMA0301BSA
			MECHANICAL	FAILURE CAUSES	MOV 023 TO	FAIL-TO-OPEN	1.00E+00	RN23MOD5S
200	6.02E-10	.01	LOSS OF OFFSITE	POWER INITIATING	EVENT OCCURS	WITH RCS DRAINED	4.44E-03	IEV-LOSPD
			FAILURE TO	RECOVER AC POWER	IN 1 HOUR		4.20E-01	OTH-R1
			PUMP 01B FAILS &	ST CK V007B & C	B FTC & RE FTC &	CB ECS221 SPO	1.53E-02	RNBMOD07S
			D/G FAILS TO	START & RUN OR	BKR 102 FAILS TO CLOSE		2.02E-02	ZO1MOD01
			FAILURE OF	PMS OUTPUT	LOGIC I/Os		2.09E-03	PMAMOD11
			OPERATOR FAILS	TO RECOGNIZE	NEED AND TO OPEN RNS MOV V023		5.00E-01	RHN-MAN05

BASIC EVENT IMPORTANCE - CASE 5

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SYSTEM UNAVAILABILITY (Q) =   6.197E-06
NUMBER OF BASIC EVENTS    =   294
NUMBER OF CUTSETS         =   6454
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BASIC EVENT	IMPORTANCE (%DECREASE)	NUMBER OF CUTSETS	DECREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1 IEV-RCSOD	53.84	457	3.3368E-06	4.4400E-06
2 RN23MOD5S	52.58	875	3.2587E-06	1.0000E+00
3 IWN-MAN00	30.84	189	1.9112E-06	5.0000E-01
4 RHN-MAN04	26.96	122	1.6709E-06	5.0000E-01
5 RHN-MAN04-SUCC	26.92	373	1.6686E-06	5.0000E-01
6 IWN-MAN00C	26.90	23	1.6669E-06	5.0000E-01
7 IEV-CCWD	23.73	1942	1.4706E-06	6.0200E-04
8 RHN-MAN05C	19.22	27	1.1913E-06	5.0000E-01
9 IWACV122AO	18.68	126	1.1577E-06	1.0000E+00
10 IWACV124AO	18.68	126	1.1577E-06	1.0000E+00
11 REC-MANDASC	16.01	46	9.9237E-07	5.0000E-01
12 IEV-CCWND	12.96	69	8.0307E-07	3.7500E-03
13 LPM-MAN05	11.36	37	7.0373E-07	5.0000E-01
14 CCX-ORY-SP	7.58	18	4.6959E-07	2.7700E-04
15 RHN-MAN05	7.04	743	4.3610E-07	5.0000E-01
16 CCX-XMTR195	5.48	16	3.3961E-07	2.0100E-04
17 IDCBSDD1TM	4.99	126	3.0896E-07	3.0000E-04
18 IDCBSDK1TM	4.99	126	3.0896E-07	3.0000E-04
19 IDCBSDS1TM	4.99	126	3.0896E-07	3.0000E-04
20 ADN-MAN01	4.98	58	3.0853E-07	5.0000E-01
21 PRN-MAN01	3.69	4	2.2868E-07	5.0000E-01
22 IEV-LOSPD	3.39	2394	2.1033E-07	4.4400E-03
23 OTH-R1	3.30	2242	2.0480E-07	4.2000E-01
24 IEV-RNSD	.08	933	1.9100E-07	8.1500E-05
25 IWB-PLUG	2.83	382	1.7530E-07	2.4000E-04
26 IEV-RNSND	2.37	46	1.4712E-07	9.6100E-04
27 CCX-INPUT-LOGIC	2.31	29	1.4331E-07	1.0300E-04
28 PMAMOD11	1.12	296	6.9551E-08	2.0900E-03
29 IW1OR170SPX	1.07	34	6.6116E-08	9.4600E-05
30 IW2OR160SPX	1.07	34	6.6116E-08	9.4600E-05
31 IRAEP121BSAX	.85	45	5.2732E-08	5.8300E-05
32 CCX-PMAMOD1X	.79	195	4.8857E-08	4.6300E-05
33 IW1TL170UFX	.77	33	4.7858E-08	6.8400E-05
34 IW2TL160UFX	.77	33	4.7858E-08	6.8400E-05
35 CCX-PMAMOD2X	.72	22	4.4727E-08	8.5800E-05
36 ED1MOD03	.62	130	3.8569E-08	2.2020E-03
37 PMA001ASA	.61	218	3.7749E-08	1.1600E-03
38 PMA001BSA	.61	218	3.7749E-08	1.1600E-03
39 REC-MANDAS	.60	36	3.6991E-08	5.0000E-01
40 ZO1MOD01	.59	518	3.6358E-08	2.0200E-02
41 IWX-CV-AO	.57	395	3.5178E-08	3.1000E-05
42 ZOX-PD-ES	.55	112	3.3998E-08	2.0000E-03
43 IWX-MV-GO1	.48	266	2.9685E-08	3.8000E-05
44 ADX-EV-SA	.48	290	2.9497E-09	3.8000E-05
45 CCX-EP-SAM	.40	215	2.4744E-08	8.6200E-06
46 MDAS	.33	79	2.0583E-08	1.0000E-02
47 EC1CB100VO	.33	375	2.0539E-08	1.2300E-02
48 ECX-CB-GO	.33	91	2.0390E-08	1.2000E-03
49 IDAMOD05	.33	354	2.0330E-08	5.1600E-04
50 CCX-SFTW	.32	26	1.9545E-08	1.2000E-06
51 CCX-PMA030X	.23	130	1.4485E-08	1.3800E-05
52 SWBMOD02	.22	147	1.3820E-08	2.4400E-02
53 CCX-INPUT-LOGICX	.21	12	1.3301E-08	2.5900E-05
54 IDAMOD04	.20	340	1.2480E-08	3.1700E-04
55 ECX-CB-GC	.20	73	1.2340E-08	7.3000E-04
56 ZO2MOD01	.19	181	1.1902E-08	2.0200E-02
57 IEV-LOCA24ND	.19	121	1.1772E-08	1.6800E-05
58 CCX-PMAMOD1-SW	.19	128	1.1699E-08	1.1000E-05
59 IDABSDS1TM	.18	255	1.1388E-08	3.0000E-04
60 IEV-LOSPND	.17	40	1.0762E-08	1.7100E-02
61 IEV-LOCA24D	.17	393	1.0704E-08	1.1300E-05
62 IWX-FL-GP	.15	168	9.5232E-09	1.2000E-05
63 RNBMOD07S	.14	141	8.7608E-09	1.5300E-02
64 SUC-R1S	.13	9	8.0530E-09	7.6000E-01
65 EC1BS001TM	.13	442	7.8629E-09	2.7000E-03
66 EC1BS012TM	.13	442	7.8629E-09	2.7000E-03

67	EC1BS121TM	.13	442	7.8629E-09	2.7000E-03
68	ZOX-DG-DR	.12	56	7.4074E-09	4.4000E-04
69	CCX-PMAMOD1	.12	87	7.2399E-09	1.4100E-04
70	EC2CB200VO	.11	139	6.8528E-09	1.2300E-02
71	PMAMOD11X	.11	369	6.5545E-09	6.5300E-04
72	CCX-IN-LOGIC-SW	.09	8	5.6458E-09	1.1000E-05
73	CCX-PMAMOD2-SW	.09	8	5.6458E-09	1.1000E-05
74	CCBMOD01S	.09	88	5.5485E-09	1.0400E-04
75	SUC-R1S	.09	152	5.5237E-09	5.8000E-01
76	ED1MOD11	.09	71	5.2900E-09	3.1700E-04
77	ED1MOD113	.09	54	5.2900E-09	3.1700E-04
78	IEV-LOCAPRND	.08	59	5.0432E-09	1.5100E-05
79	PMAMOD21X	.08	14	4.8554E-09	1.1600E-03
80	PL5MOD11	.08	72	4.7051E-09	2.0900E-03
81	ZOX-DG-DS	.08	49	4.6900E-09	2.8000E-04
82	CCX-PMA030	.07	59	4.5693E-09	9.6900E-05
83	ZO1DG001TM	.07	95	4.3718E-09	4.6000E-02
84	IWBCV122AO	.07	132	4.1218E-09	1.7500E-03
85	IWBCV124AO	.07	132	4.1218E-09	1.7500E-03
86	CCX-EP-SAMX	.05	87	3.0879E-09	2.9400E-06
87	OTH-R2	.04	29	2.7091E-09	2.4000E-01
88	CCX-ORY-SPX	.04	112	2.7053E-09	3.6300E-06
89	PL50301ASA	.04	46	2.3567E-09	1.1600E-03
90	PL50301BSA	.04	46	2.3567E-09	1.1600E-03
91	EC1REDG2GA	.03	55	2.1517E-09	4.3600E-03
92	ZOX-PD-ER	.03	31	2.0608E-09	1.3000E-04
93	PMAXS00ASA	.03	28	1.9741E-09	8.0000E-05
94	CCX-XMTRX	.03	97	1.9520E-09	2.6300E-06
95	RNX-PM-FS	.03	48	1.7754E-09	7.7000E-04
96	ED2MOD03	.03	68	1.6401E-09	2.7000E-03
97	PMA0301ASAX	.03	176	1.6239E-09	1.6500E-04
98	PMA0301BSAX	.03	157	1.5824E-09	1.6500E-04
99	RHN-MAN03	.02	36	1.4668E-09	5.0000E-01
100	IWBCV123AO	.02	132	1.3676E-09	5.8000E-04
101	IWBCV125AO	.02	132	1.3676E-09	5.8000E-04
102	RNX-KV-GO	.02	42	1.3528E-09	6.1000E-04
103	CCX-BY-PN	.02	237	1.3132E-09	4.7000E-05
104	ZO1MOD04	.02	82	1.0767E-09	1.2500E-03
105	ED3MOD03	.02	35	9.6831E-10	2.2020E-03
106	PMAMOD12X	.02	123	9.5351E-10	6.5300E-04
107	IDDBSDD1TM	.02	343	9.3398E-10	3.0000E-04
108	IDDBSDK1TM	.02	343	9.3398E-10	3.0000E-04
109	IDDBSDS1TM	.02	343	9.3398E-10	3.0000E-04
110	RNAMOD06S	.01	85	8.9943E-10	1.5300E-02
111	PL4MOD11	.01	43	8.9581E-10	2.0900E-03
112	PL1MOD11	.01	36	8.9387E-10	2.0900E-03
113	PL7MOD11	.01	36	8.9387E-10	2.0900E-03
114	PMAXS00ASAX	.01	158	8.7293E-10	8.0000E-05
115	ED1MOD01	.01	22	8.5167E-10	5.0400E-04
116	ZOX-BL-ES	.01	15	8.4416E-10	6.0000E-05
117	CCX-BY-PN1	.01	16	8.0309E-10	5.7000E-05
118	SWBMOD09P	.01	31	7.9039E-10	1.8500E-03
119	CCX-IV-XR	.01	132	6.8129E-10	2.4000E-05
120	IWACV123AO	.01	126	6.7191E-10	5.8000E-04
121	IWACV125AO	.01	126	6.7191E-10	5.8000E-04
122	CCB-MAN01	.01	6	6.6190E-10	5.0000E-01
123	PMAMOD22X	.01	2	6.0800E-10	1.1600E-03
124	DAS	.01	4	5.3345E-10	1.0000E-02
125	RNDEP023SA	.01	267	5.2978E-10	1.7100E-04
126	CCX-AV-LA	.01	5	5.2224E-10	6.1000E-05
127	CCNTF101RI	.01	5	4.7057E-10	5.2300E-03
128	SWNTP001RI	.01	5	4.7057E-10	5.2300E-03
129	SWB-MAN02	.01	4	4.7050E-10	5.0000E-01
130	IDAMC008	.01	96	4.6218E-10	3.1700E-04
131	CMX-CV-GO	.01	4	4.3656E-10	5.1000E-05
132	CCX-PMDMOD1	.01	249	4.3604E-10	1.4100E-04
133	ZO2MOD04	.01	44	4.2124E-10	1.2500E-03
134	ED1MOD13	.01	16	4.0011E-10	3.1700E-04
135	ED1MOD07	.01	16	3.8487E-10	3.0500E-04
136	PL40301ASA	.01	29	3.8104E-10	1.1600E-03
137	PL40301BSA	.01	26	3.8068E-10	1.1600E-03
138	PL10301ASA	.01	25	3.8030E-10	1.1600E-03
139	PL70301ASA	.01	25	3.8030E-10	1.1600E-03
140	PL10301BSA	.01	24	3.8020E-10	1.1600E-03
141	PL70301BSA	.01	24	3.8020E-10	1.1600E-03
142	IDBBSDD1TM	.01	125	3.6261E-10	3.0000E-04
143	IDBBSDK1TM	.01	125	3.6261E-10	3.0000E-04
144	IDBBSDS1TM	.01	125	3.6261E-10	3.0000E-04
145	CCX-PMAMOD4	.01	41	3.5227E-10	4.9800E-05
146	RC1OR195SP	.01	4	3.3587E-10	7.2200E-03
147	CMX-VS-FA	.01	7	3.2365E-10	3.8400E-05

148	ZON-MAN01	.01	7	3.2320E-10	5.0000E-01
149	IWA-PLUG	.30	136	2.9131E-10	2.4000E-04
150	CCX-PMD030	.00	163	2.4508E-10	9.6900E-05
151	RC1TL195UF	.00	3	2.3779E-10	5.2300E-03
152	PMA0302ASAX	.00	59	2.1048E-10	1.6500E-04
153	SWAMOD07	.00	39	1.8637E-10	7.1200E-03
154	PMA0302BSAX	.00	40	1.6899E-10	1.6500E-04
155	CCX-PMDMOD4	.00	118	1.2403E-10	4.9800E-05
156	CCX-PL4MOD1	.00	15	1.2347E-10	1.4100E-04
157	CCAMOD02	.00	37	1.1131E-10	7.1000E-04
158	EC1MOD12	.00	66	1.1052E-10	4.8000E-05
159	IDAMOD06	.00	48	9.6335E-11	4.3200E-05
160	IDAMOD02	.00	31	9.0318E-11	2.7000E-03
161	IDAMOD03	.00	31	9.0318E-11	2.7000E-03
162	EC5EPMGB1SA	.00	8	8.7669E-11	1.7100E-04
163	PXX-AV-LA	.00	57	8.3091E-11	6.1000E-05
164	CCX-PMAMOD4-SW	.00	12	7.3239E-11	1.1000E-05
165	CCX-PL1MOD1	.00	8	7.2306E-11	1.4100E-04
166	CCX-PL7MOD1	.00	8	7.2306E-11	1.4100E-04
167	IRAEP121ASAX	.00	42	6.6882E-11	5.8300E-05
168	ED3MOD07	.00	26	6.4948E-11	3.0500E-04
169	PL1MOD51	.00	2	6.2000E-11	8.7400E-04
170	PMDMOD11	.00	194	5.5596E-11	2.0900E-03
171	CCX-PL403	.00	12	4.9853E-11	9.6900E-05
172	EC1REDG1GA	.00	37	4.7551E-11	4.3600E-03
173	ED3MOD01	.00	10	4.3471E-11	5.0400E-04
174	DG1-LOGIC	.00	1	4.0700E-11	5.8000E-03
175	IDABSDS1LF	.00	24	3.9891E-11	4.8000E-06
176	CCX-LS-FA	.00	32	3.7345E-11	5.3700E-06
177	EC1MOD121	.00	24	3.5320E-1	1.6800E-05
178	ZO2DG002TM	.00	42	3.4979E-11	4.6000E-02
179	EC2BS002TM	.00	178	2.8158E-11	2.7000E-03
180	EC2BS022TM	.00	178	2.8158E-11	2.7000E-03
181	EC2BS221TM	.00	178	2.8158E-11	2.7000E-0?
182	IDDFD019RQ	.00	51	2.7819E-11	1.2000E-05
183	IDDFD020RQ	.00	51	2.7819E-11	1.2000E-05
184	CCX-PMAEHOX	.00	11	2.6854E-11	4.0300E-06
185	CCX-PMDMOD1-SW	.00	49	2.5515E-11	1.1000E-05
186	CCX-PMDMOD4-SW	.00	49	2.5515E-11	1.1000E-05
187	PMAMOD41	.00	34	2.4556E-11	6.3500E-04
188	RNX-CV-GO	.00	11	2.2157E-11	5.1000E-05
189	IDAMOD07	.00	15	2.0916E-11	2.1900E-02
190	CCX-PL103	.00	6	1.8601E-11	9.6900E-05
191	CCX-PL703	.00	6	1.8601E-11	9.6900E-05
192	ED2MOD01	.00	1	1.7900E-11	5.0400E-04
193	PMDMOD12	.00	83	1.6617E-11	2.0900E-03
194	PMD0301ASA	.00	125	1.6120E-11	1.1600E-03
195	PL5XS00ASA	.00	6	1.5354E-11	8.0000E-05
196	PMD0301BSA	.00	108	1.4524E-11	1.1600E-03
197	SWAMOD09P	.00	22	1.3491E-11	1.8500E-03
198	IDCFD007RQ	.00	8	1.2347E-11	1.2000E-05
199	IDCFD008RQ	.00	8	1.2347E-11	1.2000E-05
200	IDBFD013RQ	.00	10	1.1754E-11	1.2000E-05
201	IDBFD014RQ	.00	10	1.1754E-11	1.2000E-05
202	IDDBSDD1LF	.00	28	1.1051E-11	4.8000E-06
203	IDDBSDK1LF	.00	28	1.1051E-11	4.8000E-06
204	IDDBSDS1LF	.00	28	1.1051E-11	4.8000E-06
205	CCX-PMDEHO	.00	26	9.2671E-12	4.0300E-06
206	AD2MOD01	.00	21	8.7184E-12	5.5400E-02
207	AD2MOD02	.00	21	8.7184E-12	5.5400E-02
208	AD3MOD03	.00	21	8.7184E-12	5.5400E-02
209	AD3MOD04	.00	21	8.7184E-12	5.5400E-02
210	ALI-IND-FAIL	.00	27	7.3400E-12	1.0000E-06
211	EC1BS001LF	.00	7	7.3100E-12	4.8000E-06
212	RNX-PM-ER	.00	10	6.8751E-12	1.6000E-05
213	PMDMOD41	.00	67	6.5872E-12	6.3500E-04
214	ZANMOD01	.00	8	6.1859E-12	8.4000E-05
215	CCX-PM-ER	.00	10	6.0156E-12	1.4000E-05
216	SWX-PM-ER	.00	10	6.0156E-12	1.4000E-05
217	ED2MOD11	.00	20	5.3288E-12	3.1700E-04
218	IDDMOD33	.00	45	4.9640E-12	5.1600E-04
219	PMD0302ASA	.00	46	4.9126E-12	1.1600E-03
220	IDDMOD32	.00	58	4.6931E-12	3.1700E-04
221	CCX-IV-XR1	.00	6	4.6030E-12	2.4000E-05
222	CCX-PL4MOD1-SW	.00	8	4.5841E-12	1.1000E-05
223	CCX-EP-SA	.00	8	3.5885E-12	8.6200E-06
224	PL4MOD12	.00	16	3.4699E-12	2.0900E-03
225	IDBBSDD1LF	.00	7	3.4044E-12	4.8000E-06
226	IDBBSDK1LF	.00	7	3.4044E-12	4.8000E-06
227	IDBBSDS1LF	.00	7	3.4044E-12	4.8000E-06
228	PMD0302BSA	.00	29	3.3169E-12	1.1600E-03

229	IDCBSDD1LF	.00	4	3.2949E-12	4.8000E-06
230	IDCBSDK1LF	.00	4	3.2949E-12	4.8000E-06
231	IDCBSDS1LF	.00	4	3.2949E-12	4.8000E-06
232	EC1MOD01	.00	16	3.2830E-12	2.0200E-04
233	EC2MOD01	.00	14	2.5059E-12	2.0200E-04
234	PMAEH0A1SAX	.00	6	2.1599E-12	8.0000E-05
235	PMAMOD42	.00	4	2.0129E-12	6.3500E-04
236	CCX-PL1MOD1-SW	.00	4	1.9811E-12	1.1000E-05
237	CCX-PL7MOD1-SW	.00	4	1.9811E-12	1.1000E-05
238	RNAEPRNPSA	.00	9	1.7508E-12	1.7100E-04
239	RNBEPRNPSA	.00	9	1.7508E-12	1.7100E-04
240	IDDMOD38	.00	31	1.6636E-12	3.1700E-04
241	SW7EPSBPASA	.00	7	1.4734E-12	1.7100E-04
242	PL1MOD12	.00	7	1.4055E-12	2.0900E-03
243	PL7MOD12	.00	7	1.4055E-12	2.0900E-03
244	PL40302ASA	.00	7	1.1774E-12	1.1600E-03
245	CC1EPSBPASA	.00	6	1.0401E-12	1.7100E-04
246	ADX-MV-GO	.00	4	1.0300E-12	1.1000E-05
247	Z01MOD03	.00	8	1.0089E-12	1.0000E-04
248	DC2-LOGIC	.00	1	9.6501E-13	5.0000E-03
249	SW7EPSBPBSA	.00	5	8.7430E-13	1.7100E-04
250	CC1EPSBPBSA	.00	5	8.7408E-13	1.7100E-04
251	PL40302BSA	.00	4	8.1801E-13	1.1600E-03
252	SW7EPCTFASA	.00	4	7.8804E-13	1.7100E-04
253	SW7EPCTFBSA	.00	4	7.8804E-13	1.7100E-04
254	PMDXS00ASA	.00	32	7.8781E-13	8.0000E-05
255	ED1BSDS1LF	.00	3	7.8693E-13	4.8000E-06
256	PMDEH0A1SA	.00	28	7.7915E-13	8.0000E-05
257	Z02MOD03	.00	5	5.8920E-13	1.0000E-04
258	ED3BSDS1TM	.00	1	4.8805E-13	3.0000E-04
259	IWNTK001AF	.00	5	4.8728E-13	2.4000E-06
260	PMDMOD42	.00	11	4.8694E-13	6.3500E-04
261	PL10302ASA	.00	3	4.3932E-13	1.1600E-03
262	PL70302ASA	.00	3	4.3932E-13	1.1600E-03
263	PRAAV108LA	.00	11	3.6260E-13	1.0900E-03
264	PRBAV108LA	.00	11	3.6260E-13	1.0900E-03
265	PL10302BSA	.00	2	3.4395E-13	1.1600E-03
266	PL70302BSA	.00	2	3.4395E-13	1.1600E-03
267	CCX-HE-AF	.00	3	3.1908E-13	1.2000E-06
268	PL1XS00ASA	.00	3	2.9976E-13	8.0000E-05
269	PL4XS00ASA	.00	3	2.9976E-13	8.0000E-05
270	PL7XS00ASA	.00	3	2.9976E-13	8.0000E-05
271	CCX-BC-SA	.00	5	2.8222E-13	8.4000E-06
272	PLMMOD41	.00	2	2.4203E-13	6.3500E-04
273	CCX-XMTR	.00	3	1.9007E-13	2.0100E-04
274	EC2MOD22	.00	17	1.8141E-13	4.8000E-05
275	PRAAV108TM	.00	9	1.6143E-13	5.0000E-04
276	PRBAV108TM	.00	9	1.6143E-13	5.0000E-04
277	CCX-TRNSM	.00	2	1.4899E-13	2.0100E-04
278	EC1MOD13	.00	2	1.4067E-13	4.8000E-05
279	EC2MOD23	.00	2	1.4067E-13	4.8000E-05
280	ZOX-BL-ER	.00	1	9.6367E-14	1.3600E-06
281	ZOX-FL-GP	.00	1	9.2149E-14	1.3000E-06
282	IDDMOD21	.00	6	4.9960E-14	1.9200E-04
283	IDABSDD1TM	.00	3	3.1641E-14	3.0000E-04
284	IDABSDK1TM	.00	3	3.1641E-14	3.0000E-04
285	PRX-HR-ML	.00	4	2.4314E-14	1.2000E-07
286	PMDEH0A2SA	.00	10	1.7764E-14	8.0000E-05
287	IDDMOD34	.00	10	1.2212E-14	4.3200E-05
288	PRCEP108SA	.00	1	1.0769E-14	1.7100E-04
289	PRDEP108SA	.00	1	1.0769E-14	1.7100E-04
290	IDDMOD35	.00	4	5.7732E-15	2.1900E-02
291	EC2MOD221	.00	3	1.3323E-15	1.6800E-05
292	IWX-XMTRLW	.00	2	1.3323E-15	9.2000E-09
293	IDDMOD22	.00	3	9.9920E-16	2.7000E-03
294	IDDMOD23	.00	3	9.9920E-16	2.7000E-03

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        SYSTEM UNAVAILABILITY (Q) =   6.197E-06
        NUMBER OF BASIC EVENTS     =   294
        NUMBER OF CUTSETS          =   6454
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	BASIC EVENT	IMPORTANCE (%INCREASE)	NUMBER OF CUTSETS	INCREASE IN SYSTEM UNAVAILABILITY	BASIC EVENT PROBABILITY
1	IEV-RCSOD	1.212687E+07	457	7.5153E-01	4.4400E-06
2	CCX-SFTW	262824.	26	1.6288E-02	1.2000E-06
3	CCX-EP-SAM	46319.2	215	2.8705E-03	8.6200E-06
4	IEV-CCWD	39395.8	1942	2.4415E-03	6.0200E-04
5	IEV-RNSD	37813.5	933	2.3434E-03	8.1500E-05
6	CCX-ORY-SP	27347.7	18	1.6948E-03	2.7700E-04
7	CCX-XMTR195	27258.5	16	1.6893E-03	2.0100E-04
8	CCX-INPUT-LOGIC	22449.4	29	1.3912E-03	1.0300E-04
9	IWX-CV-AO	18310.5	395	1.1347E-03	3.1000E-05
10	CCX-PMAMOD1-SW	17162.0	128	1.0636E-03	1.1000E-05
11	CCX-PMAMOD1X	17026.5	195	1.0552E-03	4.6300E-05
12	CCX-EP-SAMX	16948.0	87	1.0503E-03	2.9400E-06
13	CCX-PMA030X	16936.4	130	1.0496E-03	1.3800E-05
14	IDCBSDD1TM	16613.2	126	1.0296E-03	3.0000E-04
15	IDCBSDK1TM	16613.2	126	1.0296E-03	3.0000E-04
16	IDCBSDS1TM	16613.2	126	1.0296E-03	3.0000E-04
17	IEV-LOCA24D	15285.5	393	9.4728E-04	1.1300E-05
18	IRAEP121BSAX	14594.3	45	9.0445E-04	5.8300E-05
19	IWX-FL-GP	12805.5	168	7.9359E-04	1.2000E-05
20	IWX-MV-GOI	12604.7	266	7.8115E-04	3.8000E-05
21	ADX-EV-SA	12525.2	290	7.7622E-04	3.8000E-05
22	CCX-ORY-SPX	12025.6	112	7.4526E-04	3.6300E-06
23	CCX-XMTRX	11976.2	97	7.4220E-04	2.6300E-06
24	IWB-PLUG	11783.6	382	7.3026E-04	2.4000E-04
25	IEV-LOCA24ND	11306.4	121	7.0068E-04	1.6800E-05
26	IW1TL170UFX	11289.5	33	6.9964E-04	6.8400E-05
27	IW2TL160UFX	11289.5	33	6.9964E-04	6.8400E-05
28	IW1OR170SPX	11276.5	34	6.9884E-04	9.4600E-05
29	IW2OR160SPX	11276.5	34	6.9884E-04	9.4600E-05
30	CCX-PMAMOD2X	8411.01	22	5.2125E-04	8.5800E-05
31	CCX-INPUT-LOGICX	8286.46	12	5.1353E-04	2.5900E-05
32	CCX-IN-LOGIC-SW	8281.84	8	5.1325E-04	1.1000E-05
33	CCX-PMAMOD2-SW	8281.84	8	5.1325E-04	1.1000E-05
34	IEV-LOCAPRND	5389.23	59	3.3398E-04	1.5100E-05
35	IEV-CCWND	3442.63	69	2.1335E-04	3.7500E-03
36	IEV-RNSND	2467.97	46	1.5295E-04	9.6100E-04
37	CCX-PMAMOD1	828.423	87	5.1339E-05	1.4100E-04
38	IEV-LOSPD	760.990	2394	4.7160E-05	4.4400E-03
39	CCX-PMA030	760.818	59	4.7150E-05	9.6900E-05
40	IDAMOD05	635.423	354	3.9379E-05	5.1600E-04
41	IDAMOD04	635.078	340	3.9357E-05	3.1700E-04
42	IDABSDS1TM	612.359	255	3.7949E-05	3.0000E-04
43	PMAMOD11	535.860	296	3.3209E-05	2.0900E-03
44	PMA0301ASA	524.496	218	3.2504E-05	1.1600E-03
45	PMA0301BSA	524.496	218	3.2504E-05	1.1600E-03
46	CCX-IV-XR	458.046	132	2.8386E-05	2.4000E-05
47	CCX-BY-PN	450.838	237	2.7940E-05	4.7000E-05
48	PMAXS00ASA	398.157	28	2.4675E-05	8.0000E-05
49	ED1MOD03	282.009	130	1.7477E-05	2.2020E-03
50	ECX-CB-GO	273.848	91	1.6971E-05	1.2000E-03
51	ZOX-PD-ES	273.747	112	1.6965E-05	2.0000E-03
52	ECX-CB-GC	272.563	73	1.6891E-05	7.3000E-04
53	ZOX-DG-DR	271.532	56	1.6828E-05	4.4000E-04
54	ZOX-DG-DS	270.207	49	1.6745E-05	2.8000E-04
55	ED1MOD11	269.191	54	1.6682E-05	3.1700E-04
56	ED1MOD113	269.191	54	1.6682E-05	3.1700E-04
57	ZOX-PD-ER	255.766	31	1.5850E-05	1.3000E-04
58	CCX-BY-PN1	227.335	16	1.4089E-05	5.7000E-05
59	ZOX-BL-ES	227.013	15	1.4069E-05	6.0000E-05
60	PMAXS00ASAX	176.058	158	1.0911E-05	8.0000E-05
61	PMAMOD11X	161.861	369	1.0031E-05	6.5300E-04
62	PMA0301ASAX	158.786	176	9.8404E-06	1.6500E-04
63	PMA0301BSAX	154.729	157	9.5889E-06	1.6500E-04
64	CCX-AV-LA	138.139	5	8.5608E-06	6.1000E-05
65	CMX-CV-GO	138.119	4	8.5596E-06	5.1000E-05
66	CMX-VS-FA	138.098	7	8.5583E-06	3.8400E-05
67	IDABSDS1LF	134.100	24	8.3105E-06	4.8000E-06
68	ALL-IND-FAIL	118.440	27	7.3400E-06	1.0000E-06
69	CCX-PMAMOD4	114.138	41	7.0734E-06	4.9800E-05
70	CCX-LS-FA	112.215	32	6.9543E-06	5.3700E-06
71	CCX-PMAEH0X	107.522	11	6.6634E-06	4.0300E-06
72	CCX-PMAMOD4-SW	107.435	12	6.6580E-06	1.1000E-05

73	PMAMOD21X	67.4626	14	4.1808E-06	1.1600E-03
74	IDDBSDD1TM	50.2211	343	3.1123E-06	3.0000E-04
75	IDDBSDK1TM	50.2211	343	3.1123E-06	3.0000E-04
76	IDDBSDS1TM	50.2211	343	3.1123E-06	3.0000E-04
77	RNDEP023SA	49.9834	267	3.0976E-06	1.7100E-04
78	CCX-PMDMOD1	49.8938	249	3.0920E-06	1.4100E-04
79	EC1BS001TM	46.8647	442	2.9043E-06	2.7000E-03
80	EC1BS012TM	46.8647	442	2.9043E-06	2.7000E-03
81	EC1BS121TM	46.8647	442	2.9043E-06	2.7000E-03
82	CCX-PMD030	40.8082	163	2.5290E-06	9.6900E-05
83	CCX-PMDMOD4	40.1863	118	2.4904E-06	4.9800E-05
84	IWBCV123AO	38.0259	132	2.3566E-06	5.8000E-04
85	IWBCV125AO	38.0259	132	2.3566E-06	5.8000E-04
86	IWBCV122AO	37.9390	132	2.3512E-06	1.7500E-03
87	IWBCV124AO	37.9390	132	2.3512E-06	1.7500E-03
88	CCX-PMDMOD1-SW	37.4279	49	2.3195E-06	1.1000E-05
89	CCX-PMDMOD4-SW	37.4279	49	2.3195E-06	1.1000E-05
90	IDDFD019RQ	37.4069	51	2.3182E-06	1.2000E-05
91	IDDFD020RQ	37.4069	51	2.3182E-06	1.2000E-05
92	RNX-PM-FS	37.1768	48	2.3039E-06	7.7000E-04
93	IDDBSDD1LF	37.1517	28	2.3024E-06	4.8000E-06
94	IDDBSDK1LF	37.1517	28	2.3024E-06	4.8000E-06
95	IDDBSDS1LF	37.1517	28	2.3024E-06	4.8000E-06
96	EC1MOD12	37.1502	66	2.3023E-06	4.8000E-05
97	CCX-PMDEH0	37.1056	26	2.2995E-06	4.0300E-06
98	PL5MOD11	36.2505	72	2.2465E-06	2.0900E-03
99	IDAMOD06	35.9817	48	2.2299E-06	4.3200E-05
100	RNX-KV-GO	35.7622	42	2.2163E-06	6.1000E-06
101	EC1MOD121	33.9242	24	2.1024E-06	1.6800E-05
102	MDAS	32.8814	79	2.0377E-06	1.0000E-02
103	PL50301ASA	32.7446	46	2.0293E-06	1.1600E-03
104	PL50301BSA	32.7446	46	2.0293E-06	1.1600E-03
105	IWN-MAN00	30.8387	189	1.9112E-06	5.0000E-01
106	ZO1MOD01	28.4566	518	1.7635E-06	2.0200E-02
107	ED1MOD01	27.2536	22	1.6890E-06	5.0400E-04
108	RHN-MAN04	26.9627	122	1.6709E-06	5.0000E-01
109	RHN-MAN04-SUCC	26.9249	373	1.6686E-06	5.0000E-01
110	IWN-MAN00C	26.8971	23	1.6669E-06	5.0000E-01
111	EC1CB100VO	26.6128	375	1.6493E-06	1.2300E-02
112	EC1BS001LF	24.5741	7	1.5229E-06	4.8000E-06
113	PMAMOD12X	23.5466	123	1.4592E-06	6.5300E-03
114	IDAMOD08	23.5187	96	1.4575E-06	3.1700E-04
115	PXX-AV-LA	21.9785	57	1.3621E-06	6.1000E-05
116	PMA0302ASAX	20.5803	59	1.2754E-06	1.6500E-04
117	ED1MOD13	20.3605	16	1.2618E-06	3.1700E-04
118	ED1MOD07	20.3557	16	1.2615E-06	3.0500E-04
119	IWA-PLUG	19.5813	136	1.2135E-06	2.4000E-04
120	IDBBSDD1TM	19.4981	125	1.2083E-06	3.0000E-04
121	ICBBSDK1TM	19.4981	125	1.2083E-06	3.0000E-04
122	IDBBSDS1TM	19.4981	125	1.2083E-06	3.0000E-04
123	RHN-MAN05C	19.2224	27	1.1913E-06	5.0000E-01
124	IWACV123AO	18.6823	126	1.1578E-06	5.8000E-04
125	IWACV125AO	18.6823	126	1.1578E-06	5.8000E-04
126	IRAEP121ASAX	18.5104	42	1.1471E-06	5.8300E-05
127	IDCFD007RQ	16.6027	8	1.0289E-06	1.2000E-05
128	IDCFD008RQ	16.6027	8	1.0289E-06	1.2000E-05
129	PMA0302BSAX	16.5233	40	1.0240E-06	1.6500E-04
130	REC-MANDASC	16.0130	46	9.9237E-07	5.0000E-01
131	IDBFD013RQ	15.8054	10	9.7950E-07	1.2000E-05
132	IDBFD014RQ	15.8054	10	9.7950E-07	1.2000E-05
133	CCX-PL4MOD1	14.1282	15	8.7556E-07	1.4100E-04
134	ZO1MOD04	13.8817	82	8.6029E-07	1.2500E-03
135	IDBBSDD1LF	11.4445	7	7.0924E-07	4.8000E-06
136	IDBBSDK1LF	11.4445	7	7.0924E-07	4.8000E-06
137	IDBF3DS1LF	11.4445	7	7.0924E-07	4.8000E-06
138	LPM-MAN05	11.3554	37	7.0373E-07	5.0000E-01
139	IDCBSDD1LF	11.0765	4	6.8644E-07	4.8000E-06
140	IDCBSDK1LF	11.0765	4	6.8644E-07	4.8000E-06
141	IDCBSDS1LF	11.0765	4	6.8644E-07	4.8000E-06
142	IEV-LOSPND	9.98189	40	6.1860E-07	1.7100E-02
143	ED2MOD03	9.77541	68	6.0581E-07	2.7000E-03
144	ZO2MOD01	9.31575	181	5.7732E-07	2.0200E-02
145	RNBMOD07S	9.09824	141	3.6384E-07	1.5300E-02
146	SWBMOD02	8.91662	147	5.5259E-07	2.4400E-02
147	EC2CB200VO	8.87951	139	5.5029E-07	1.2300E-02
148	CCBMOD01S	8.51921	88	5.2796E-07	1.0400E-02
149	PMAMOD22X	8.44777	2	5.2353E-07	1.1600E-03
150	CCX-PL403	8.30092	12	5.1443E-07	9.6900E-05
151	CCX-PL1MOD1	8.27361	8	5.1274E-07	1.4100E-04
152	CCX-PL7MOD1	8.27361	8	5.1274E-07	1.4100E-04
153	EC5EPMGB1SA	8.27135	8	5.1260E-07	1.7100E-04

154	EC1REDG2GA	7.92880	55	4.9137E-07	4.3600E-03
155	ED3MOD03	7.08010	35	4.3877E-07	2.3020E-03
156	RHN-MAN05	7.03702	743	4.3610E-07	5.0000E-01
157	RNX-CV-GO	7.00997	11	4.?4w3E-07	5.1000E-05
158	RNX-PM-ER	6.93346	10	4.2968E-07	1.60J5E-05
159	CCX-PM-ER	6.93343	10	4.2968E-07	.4000E-05
160	SWX-PM-ER	6.93343	10	4.2968E-07	1.4000E-05
161	PL4MOD11	6.90180	43	4.2772E-07	2.0900E-03
162	PL1MOD11	6.88688	36	4.2680E-07	2.0900E-03
163	PL7MOD11	6.88688	36	4.2680E-07	2.0900E-03
164	SWBMOD09P	6.88126	31	4.2645E-07	1.8500E-03
165	CCX-PL4MOD1-SW	6.72447	8	4.1673E-07	1.1000E-05
166	CCX-E/-SA	6.71735	8	4.1629E-07	8.6200E-06
167	ZO2MOD04	5.45091	44	3.3657E-07	1.2500E-03
168	PL40301ASA	5.29427	29	3.2810E-07	1.1600E-03
169	PL10301BSA	5.28928	26	3.2779E-07	1.1600E-03
170	PL10301ASA	5.28402	25	3.2746E-07	1.1600E-03
171	PL70301ASA	5.28402	25	3.2746E-07	1.1600E-03
172	PL10301BSA	5.28269	24	3.2738E-07	1.1600E-03
173	PL70301BSA	5.28269	24	3.2738E-07	1.1600E-03
174	ADN-MAN01	4.97846	58	3.0853E-07	5.0000E-01
175	OTH-R1	4.56368	2242	2.8282E-07	4.2000E-01
176	CCX-HE-AF	4.29058	3	2.6590E-07	1.200?E-06
177	PRN-MAN01	3.69002	4	2.2868E-07	5.0L./E-01
178	ED3MOD07	3.43507	26	2.1288E-07	3.0500E-04
179	IWNTK001AF	3.27615	5	2.0303E-07	2.4000E-06
180	PRX-HR-ML	3.26944	4	2.0262E-07	1.2000E-07
181	CCX-PL103	3.09720	6	1.9194E-07	9.6900E-05
182	CCX-PL703	3.09720	6	1.9194E-07	9.6900E-05
183	PL5XS00ASA	3.09670	6	1.9191E-07	8.0000E-05
184	CCX-IV-XR1	3.09470	6	1.9179E-07	2.4000E-05
185	CCX-PL1MOD1-SW	2.90607	4	1.8010E-07	1.1000E-05
186	CCX-PL7MOD1-SW	2.90607	4	1.8010E-07	1.1000E-05
187	ED1BSDS1LF	2.64540	3	1.6394E-07	4.8000E-06
188	IWX-XMTRLW	2.33671	2	1.4481E-07	9.2000E-09
189	ZO1DG001TM	1.46303	95	9.0668E-08	4.6000E-02
190	CCNTF101RI	1.44428	5	8.9505E-08	5.2300E-03
191	SWNTP001RI	1.44428	5	8.9505E-08	5.2300E-03
192	ED3MOD01	1.39106	10	8.6208E-08	5.0400E-04
193	ZANMOD01	1.18820	8	7.3636E-08	8.4000E-05
194	ZOX-FL-GP	1.14379	1	7.0883E-08	1.3000E-06
195	PL1MOD51	1.14367	2	7.087FE-08	8.7400E-04
196	ZOX-BL-ER	1.14338	1	7.0858E-08	1.3600E-06
197	RNAMOD06S	.934076	85	5.7887E-08	1.5300E-02
198	DAS	.852177	4	5.2812E-08	1.0000E-02
199	RC1OR195SP	.745225	4	4.6184E-08	7.2200E-03
200	RC1TL195UF	.729819	3	4.5229E-08	5.2300E-03
201	PMAMCD41	.623610	34	3.8647E-08	6.3500E-04
202	REC-MANDAS	.599697	36	3.6991E-08	5.0000E-01
203	ED2MOD01	.572802	1	3.5498E-08	5.0400E-04
204	CCX-BC-SA	.542130	5	3.3597E-08	8.4000E-06
205	IDAMOD02	.538316	31	3.3361E-08	2.7000E-03
206	IDAMOD03	.538316	31	3.3361E-08	2.7000E-03
207	PMAEH0A1SAX	.435630	6	2.6997E-08	8.0000E-05
208	PMDMOD11	.428337	194	2.6545E-08	2.0900E-03
209	SWAMOD07	.419377	39	2.5990E-08	7.1200E-03
210	ED2MOD11	.271167	20	1.6805E-08	3.1700E-04
211	EC1MOD01	.262203	16	1.6249E-08	2.0200E-04
212	CCAMOD02	.251.88	37	1.5567E-08	7.1000E-04
213	IDDMOD32	.238818	58	1.4800E-08	3.1700E-04
214	PMD0301ASA	.223974	125	1.3880E-08	1.1600E-03
215	PMD0301BSA	.201802	108	1.2506E-08	1.1600E-03
216	EC2MOD01	.200135	14	1.2403E-08	2.0200E-04
217	EC1REDG1GA	.175216	37	1.0859E-08	4.3600E-03
218	EC2BS002TM	.167826	178	1.0401E-08	2.7000E-03
219	EC2BS022TM	.167826	178	1.0401E-08	2.7000E-03
220	EC2BS221TM	.167826	178	1.0401F-08	2.7000E-03
221	PMDMOD41	.167282	67	1.03676 08	6.3500E-04
222	RNAEPRNPSA	.165186	9	1.0237E-08	1.7100E-04
223	RNBEPRNPSA	.165186	9	1.0237E-08	1.7100E-04
224	ZO1MOD03	.162775	8	1.0088E-08	1.0000E-04
225	PMDXS00ASA	.158891	32	9.8469E-09	8.0000E-05
226	PMDEH0A1SA	.157145	28	9.7387E-09	8.0000E-05
227	IDDMOD33	.155153	45	9.6152E-09	5.1600E-04
228	SW7EPSBPASA	.1.9009	7	8.6148E-09	1.710JE-04
229	OTH-R2	.138427	29	8.5787E-09	2.4000E-01
230	DG1-LOGIC	.130692	1	8.0993E-09	5.0000E-03
231	PMDMOD12	.128030	83	7.9343E-09	2.0900E-03
232	SWAMOD09P	.117456	22	7.2791E-09	1.8500E-03
233	CC1EPSBPASA	9.812675E-02	6	6.0812E-09	1.7100E-04
234	ZO2MOD03	9.506411E-02	5	5.8914E-09	1.0005E-04

235	IDDMOD38	8.465288E-02	31	5.2462E-09	3.1700E-04
236	SW7EPSBPBSA	8.248806E-02	5	5.1120E-09	1.7100E-04
237	CC1EPSBPBSA	8.246711E-02	5	5.1107E-09	1.7100E-04
238	SW7EPCTFASA	7.434924E-02	4	4.6072E-09	1.7100E-04
239	SW7EPCTFBSA	7.434924E-02	4	4.6076E-09	1.7100E-04
240	PMD0302ASA	6.825780E-02	46	4.2301E-09	1.1600E-03
241	SUC-R1S	6.454369E-02	152	3.9999E-09	5.8000E-01
242	EC2MOD22	6.098189E-02	17	3.7792E-09	4.8000E-05
243	PL1XS00ASA	6.045747E-02	3	3.7467E-09	8.0000E-05
244	PL4XS00ASA	6.045747E-02	3	3.7467E-09	8.0000E-05
245	PL7XS00ASA	6.045747E-02	3	3.7467E-09	8.0000E-05
246	PMAMOD42	5.111909E-02	4	3.1680E-09	6.3500E-04
247	EC1MOD13	4.728522E-02	2	2.9304E-09	4.8000E-05
248	EC2MOD23	4.728522E-02	2	2.9304E-09	4.8000E-05
249	PMD0302BSA	4.608624E-02	29	2.8561E-09	1.1600E-03
250	SUC-R2S	4.103499E-02	9	2.5430E-09	7.6000E-01
251	PL4MOD12	2.673385E-02	16	6568E-09	2.0900E-03
252	ED3BSDS1TM	2.624322E-02	1	1.6264E-09	3.0000E-04
253	R N-MAN03	2.366856E-02	36	1.4668E-09	5.0000E-01
254	PL40302ASA	1.635910E-02	7	1.0138E-09	1.1600E-03
255	CCX-XMTR	1.525567E-02	3	9.4543E-10	2.0100E-04
256	ADX-MV-GO	1.509203E-02	4	9.3529E-10	1.1000E-03
257	IDAMOD07	1.507377E-02	15	9.3416E-10	2.1900E-02
258	PMDMOD42	1.236602E-02	11	7.6635E-10	6.3500E-04
259	CCX-TRNSM	1.195859E-02	2	7.4110E-10	2.0100E-04
260	2O2DG002TM	1.170559E-02	42	7.2543E-10	4.6000E-02
261	PL40302BSA	1.136576E-02	4	7.0437E-10	1.1600E-03
262	PL1MOD12	1.082903E-02	7	6.7110E-10	2.0900E-03
263	PL7MOD12	1.082903E-02	7	6.7110E-10	2.0900E-03
264	CCB-MAN01	1.068054E-02	6	6.6190E-10	5.0000E-01
265	SWB-MAN02	7.592071E-03	4	4.7050E-10	5.0000E-01
266	PLMMOD41	6.146357E-03	2	3.8091E-10	6.3500E-04
267	PL10302ASA	6.104006E-03	3	3.7828E-10	1.1600E-03
268	PL70302ASA	6.104006E-03	3	3.7828E-10	1.1600E-03
269	PRAAV108LA	5.362002E-03	11	3.3230E-10	1.0900E-03
270	PRBAV108LA	5.362002E-03	11	3.3230E-10	1.0900E-03
271	ZON-MAN01	5.215211E-03	7	3.2320E-10	5.0000E-01
272	PRAAV108TM	5.207006E-03	9	3.2269E-10	5.0000E-04
273	PRBAV108TM	5.207006E-03	9	3.2269E-10	5.0000E-04
274	PL10302BSA	4.778926E-03	2	2.9616E-10	1.1600E-03
275	PL70302BSA	4.778926E-03	2	2.9616E-10	1.1600E-03
276	IDDMOD34	4.561431E-03	10	2.8268E-10	4.3200E-05
277	IDDMOD21	4.197965E-03	6	2.6016E-10	1.9200E-04
278	PMDEH0A2SA	3.582665E-03	10	2.2203E-10	8.0000E-05
279	DG2-LOGIC	3.098730E-03	1	1.9204E-10	5.0000E-03
280	AD2MOD01	2.398687E-03	21	1.4865E-10	5.5400E-02
281	AD2MOD02	2.398687E-03	21	1.4865E-10	5.5400E-02
282	AD3MOD03	2.398687E-03	21	1.4865E-10	5.5400E-02
283	AD3MOD04	2.398687E-03	21	1.4865E-10	5.5400E-02
284	IDABSDD1TM	1.701391E-03	3	1.0544E-10	3.0000E-04
285	IDABSDK1TM	1.701391E-03	3	1.0544E-10	3.0000E-04
286	EC2MOD221	1.279604E-03	3	7.9300E-11	1.6800E-05
287	PRCEP108SA	1.016043E-03	1	6.2967E-11	1.7100E-04
288	PRDFP108SA	1.016043E-03	1	6.2967E-11	1.7100E-04
289	IDDMOD22	5.955462E-06	3	3.6908E-13	2.7000E-03
290	IDDMOD23	5.955462E-06	3	3.6908E-13	2.7000E-03
291	IDDMOD35	4.160575E-06	4	2.5784E-13	2.1900E-02
292	RN23MOD5S	.000000	875	0.0000E+00	1.0000E+00
293	IWACV122AO	.000000	126	0.0000E+00	1.0000E+00
294	IWACV124AO	.000000	126	0.0000E+00	1.0000E+00

Overdraining of Reactor Coolant System During Draindown to Mid-Loop

Figure 720.303-4

S4B-1

720.303011.26

Westinghouse

AP600

Loss of Offsite Power (RCS Drained) Event Tree

Figure 54B-2

Westinghouse

137

Loss of RNS Initiator (RCS Drained) Event Tree

Figure 54B-3

Response Revision

AP600

LOCS0	ADS	G	G1MS

| CCW-0 | ADS3D | I43A | I43MS |

1 OK
2 OK
3 LP-3RE
LP-SD
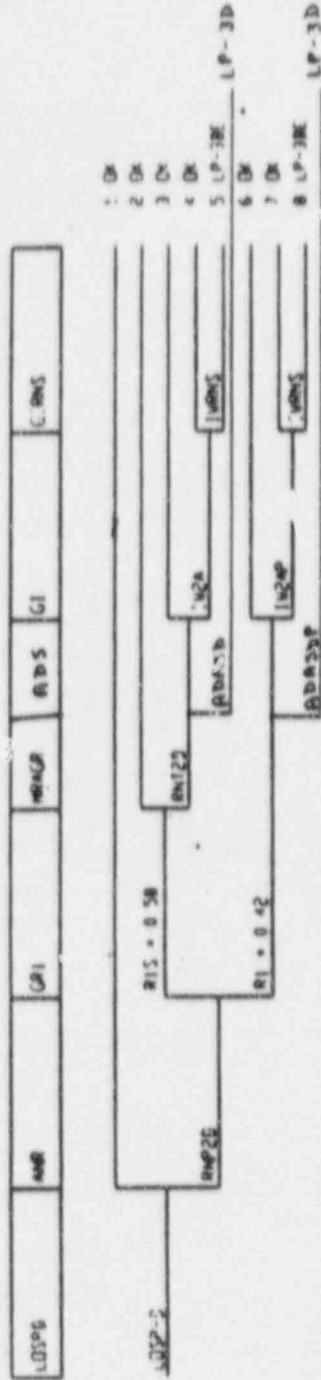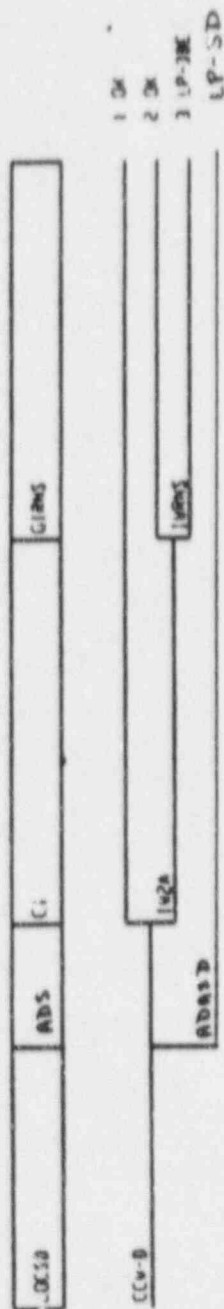
Event	Descr pt on
LOCS0	LOSS OF CCW/SW DURING DRAINED MAINTENANCE (MID-LOOP/VESSEL FLANGE)
G1	GRAVITY INJECTION
G1MS	GRAVITY INJECTION FROM IRWST VIA RNS SUCTION LINE
ADS	4TH STAGE ADS ACTUATION

Loss of CCW/SW Initiator (RCS Drained) Event Tree

S4B-4

Figure 720.303-4

720.303(R)-77

Westinghouse

AP600

LOCA/RNS-V024 Open (RCS Drained) Event Tree

Figure 720-303(R1)-80

Westinghouse

This sensitivity is performed by modifying the following basic events in the quantification output file:

IWACV122AO = 1.0; IWACV123AO = 5.8E-04; IWACV124AO = 1.0;
IWACV125AO = 5.8E-04; IWBCV122AO = 1.75E-03; IWBCV123AO = 5.8E-04;
IWBCV124AO = 1.75E-03; IWBCV125AO = 5.8E-04; IWX-CV-AO = ~~5.4E-07~~ 3.1E-05; IWX-MV-GO1 = ~~1.0E-05~~ 3.8E-05; IRWMOD05S = 0; and IRWMOD06S = 0.

Requantification of the cutset file with these changes provides a core damage frequency of ~~1.8E-07~~ 2.0E-07 events per year. Since this evaluation is a sensitivity study of the main exercise in assessing the reliability of the new IRWST design, the output file for this case is not included in this report.

This estimate of the core damage frequency at shutdown is believed to be conservative for the following reasons:

- One train of the IRWST is assumed to fail during both drained and non-drained conditions.

- Approximately ~~67~~ 61 percent of the core damage frequency of ~~1.8E-07~~ 2.0E-07 events per year is attributed to dominant failures that include failure of the IRWST injection line strainer; (i.e., the top two cutsets total 1.2E-07, and these cutsets include basic event IWB-PLUG).

- The IRWST water is considered to be clean water, suitable for injection into the RCS.

- The IRWST is covered to preclude material that could clog the strainer from entering the tank.

- The IRWST strainer is assigned a conservative failure probability of 2.4E-04 in Revision 6 of the PRA. The plugging of the IRWST strainer is expected to be a much less probable event than reflected in a failure probability of 2.4E-04.

Therefore, failure of the IRWST line strainer is more dominant than would be expected for failure of a strainer in a clean water system. If a more realistic failure probability is used for strainer plugging, the resulting core damage frequency of the model having a single IRWST train configuration should be much closer to the core damage frequency of 5.5E-08 events per year. This is obtained from the baseline shutdown model of PRA, Revision 6.

54A.2 IRWST Recirculation Paths Changed from 10-inch and 4-inch Lines to 6-inch Lines

This design change has no impact on the shutdown core damage frequency calculation, since the recirculation function is not credited in the Level 1 shutdown PRA. (See note in Section 54A.3 below).