Northeast
Nuclear Energy

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The Northeast Utilities System

AUG 25 2000

Docket No. 50-336
B18205

Re: 10 CFR 50.90

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

Millstone Nuclear Power Station, Unit No. 2
Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1

Pursuant to 10 CFR 50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License DPR-65 by incorporating the attached proposed change into the Technical Specifications of Millstone Unit No. 2 (MP2). NNECO is proposing a one time extension to the allowed outage time (AOT) for Action a.2 of Technical Specification (TS) 3.8.1.1, "Electrical Power Systems - A. C. Sources - Operating." The proposed change extends the AOT for Action a.2 of TS 3.8.1.1 from 72 hours to 14 days provided the Millstone Unit No. 3 (MP3) station blackout (SBO) diesel generator is available to supply MP2, otherwise the AOT would only be extended to 7 days. This allowance is required to support the replacement of the MP2 4.16 kV cross-tie from Millstone Unit No. 1 (MP1) with a cross-tie from MP3. This modification is being made due to the decommissioning of MP1. In addition, it has been determined that the modification to replace the MP2 4.16 kV cross-tie from MP1 with a cross-tie from MP3 involves unreviewed safety questions. The unreviewed safety questions have been submitted to the Nuclear Regulatory Commission for review and approval by a separate letter dated August 25, 2000.[1]

The MP2 4.16 kV cross-tie from MP1 is an important aspect of the MP2 licensing and design basis. The cross-tie is one of the sources of offsite power utilized to comply with 10 CFR 50, Appendix A, General Design Criterion 17 and Technical Specification 3.8.1.1. It also permits the MP1 diesel generator to supply power to MP2 in the event of a SBO event or 10 CFR 50, Appendix R fire. The existing MP2 4.16 kV cross-tie is provided by a tie from MP1 bus 14H to the MP2 swing bus 24E. This cross-tie will be replaced by a tie that can be aligned from MP3 bus 34A or 34B to the MP2 swing bus 24E.

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(1) R. P. Necci letter to the NRC, "Millstone Nuclear Power Station, Unit Nos. 2 and 3, License Amendment Request, Proposed Revisions to Final Safety Analysis Reports, 4160 V Cross-Tie of MP3 to MP2," dated August 25, 2000.

A001

Attachment 1 provides a discussion of the proposed changes and the Safety Summary. Attachment 2 provides the Significant Hazards Consideration. Attachment 3 provides the marked-up version of the appropriate page of the current Technical Specifications affected by the proposed change. Attachment 4 provides the retyped page of the Technical Specifications incorporating the proposed change. Attachment 5 provides an estimate of the time required to restore the alternate source of offsite power. Attachment 6 provides the top 25 core damage sequences associated with the second alternate source and bus 24E being out of service. Attachment 7 provides the top 25 core damage sequences associated with the second alternate source being out of service. Attachment 8 provides a list of the regulatory commitments contained in this letter.

Environmental Considerations

NNECO has reviewed the proposed License Amendment Request against the criteria of 10 CFR 51.22, and has determined that the proposed change meets the requirements for a categorical exclusion from an environmental review in accordance with 10 CFR 51.22(c)(9). The proposed change does not involve a Significant Hazards Consideration, does not significantly increase the type or amounts of effluents that may be released offsite, and does not significantly increase individual or cumulative occupational radiation exposures. Therefore, NNECO has determined the proposed change will not have a significant effect on the quality of the human environment.

Conclusions

The one time extension to Action a.2 of MP2 TS 3.8.1.1 does not involve an impact on public health and safety (see the Safety Summary provided in Attachment 1) and does not involve a Significant Hazards Consideration pursuant to the provisions of 10 CFR 50.92 (see the Significant Hazards Consideration provided in Attachment 2). In addition, we have concluded the proposed change is safe.

Plant Operations Review Committee and Nuclear Safety Assessment Board

The Plant Operations Review Committee and Nuclear Safety Assessment Board have reviewed and concurred with these determinations.

Schedule

We request issuance at your earliest convenience, with the amendment to be implemented within 60 days of issuance. In addition, this license amendment request needs to be approved coincident with another license amendment request submitted on August 25, 2000. That license amendment request addresses the unreviewed safety questions associated with the modification to replace the MP2 4.16 kV cross-tie from MP1 with a cross-tie from MP3.

State Notification

In accordance with 10 CFR 50.91(b), a copy of this License Amendment Request is being provided to the State of Connecticut.

If you have any questions on the above, please contact Mr. Ravi G. Joshi at (860) 440-2080.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Raymond P. Necci
Vice President - Nuclear Technical Services

Sworn to and subscribed before me

this 25th day of August, 2000

Notary Public

My Commission expires SANDRA J. ANTON
NOTARY PUBLIC
COMMISSION EXPIRES
MAY 31, 2005

Attachments (8)

cc: H. J. Miller, Region I Administrator
J. I. Zimmerman, NRC Project Manager, Millstone Unit No. 2
S. R. Jones, Senior Resident Inspector, Millstone Unit No. 2

Director
Bureau of Air Management
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

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Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Discussion of Proposed Changes and Safety Summary

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Discussion of Proposed Changes and Safety Summary

Introduction

Limiting Condition for Operation (LCO) 3.8.1.1.a of the Millstone Unit No. 2 (MP2) Technical Specifications requires "two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system" to be operable. The two physically independent circuits from the switchyard to the onsite electrical distribution system are:

a. MP2 station safeguards busses 24C and 24D via the MP2 Reserve Station Service Transformer and bus 24G; and

b. MP2 station bus 24E via the Millstone Unit No. 1 (MP1) Reserve Station Service Transformer or the MP1 Normal Station Service Transformer (backfeeding) and bus 14H.

Northeast Nuclear Energy Company (NNECO) is planning to replace the MP2 4.16 kV cross-tie from MP1 with a 4.16 kV cross-tie from Millstone Unit No. 3 (MP3). This modification is being made due to the decommissioning of MP1. It has been determined that this modification involves unreviewed safety questions. The unreviewed safety questions have been submitted to the Nuclear Regulatory Commission for review and approval by a separate letter dated August 25, 2000.[1]

When the MP2 4.16 kV cross-tie from MP1 is removed from service, MP2 must comply with Action a. of TS 3.8.1.1. Action a.2 of TS 3.8.1.1 requires the inoperable offsite circuit to be restored to an operable status within 72 hours or the plant placed in Hot Standby within the next 6 hours and Cold Shutdown within the following 30 hours.

NNECO has carefully considered the scope and nature of the work involved and anticipates that approximately 6 days will be required to restore compliance with LCO 3.8.1.1.a (i.e., install, test, and place in service the MP2 4.16 kV cross-tie from MP3). This estimate is based on the schedule provided in Attachment 5. (The schedule is for illustration purposes only.) This time period is greater than the 72 hours currently permitted by Action a.2 of TS 3.8.1.1 to restore an inoperable offsite source prior to entering a shutdown requirement. Therefore, a one time extension of the allowed outage time (AOT) for Action a.2 of TS 3.8.1.1 is required to permit the modification to be implemented, while maintaining MP2 at power. To account for unplanned complications, NNECO is requesting a one time extension of the TS AOT to 14 days.

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[1] R. P. Necci letter to the NRC, "Millstone Nuclear Power Station, Unit Nos. 2 and 3, License Amendment Request, Proposed Revisions to Final Safety Analysis Reports, 4160 V Cross-Tie of MP3 to MP2," dated August 25, 2000.

Description of Technical Specification Change

The proposed change extends the AOT for Action a.2 of MP2 TS 3.8.1.1 from the existing limit of 72 hours to 14 days provided the MP3 station blackout (SBO) diesel generator (DG) is available to supply MP2, otherwise the AOT can only be extended to 7 days. The addition of the footnote to TS 3.8.1.1 is a one time change to support the replacement of the MP2 4.16 kV cross-tie from MP1 with a cross-tie from MP3.

Safety Summary

The MP2 onsite electric power system consists of the normal station service transformer (NSST), which is powered by the main generator and provides normal power to two onsite 4.16 kV non-emergency buses, 24A and 24B. Non-emergency buses 24A and 24B supply power to 4.16 kV emergency buses 24C and 24D. In the event of a unit trip and loss of power from the NSST, the emergency buses (24C and 24D) would transfer to the reserve station service transformer (RSST) via a fast transfer scheme. The RSST is the preferred offsite power source. If the MP2 NSST and RSST are not available, MP1 can supply power to MP2 via bus 14H to bus 24E. This circuit is the alternate (delayed) offsite power source. The 24E bus also serves as a transferable power source for spare units of emergency equipment (i.e., service water pump, reactor building closed cooling water pump, and high pressure safety injection pump). The 24E bus is connected to either the 24C or 24D bus. In addition, on a complete loss of offsite power, the two emergency buses (24C and 24D) are designed to connect automatically to their respective emergency diesel generators.

During the implementation of the modification to provide MP2 with a 4.16 kV cross-tie from MP3, NNECO will:

1. Appropriately consider the 7 day and 14 day weather forecasts prior to removing the MP2 4.16 kV cross-tie with MP1 from service to minimize the potential for loss of offsite power due to severe weather or salt spray.

2. Protect the equipment redundant to the systems removed from service or whose power supply is affected by this modification. This includes limiting work on the 345 kV lines, the switchyard, the RSST, the diesel generators, the service water system, the high pressure safety injection system, and the reactor building closed cooling water system. This restriction will ensure that MP2 will remain capable of mitigating any potential design basis accident during the implementation of the modification.

3. Within 7 days of entering Action a. of TS 3.8.1.1, establish the capability to supply MP2 with power from the MP3 SBO DG via operator actions within one hour of an event resulting in a loss of the remaining offsite source of power. The MP3 SBO DG will be available to serve as a temporary diesel generator. The MP3 SBO DG has a continuous rating of 2825 KVA (2260 kW @ 0.8pf) and a 7 day rating of 3217 kVA (2574 kW @ 0.8 pf). The worst case post-incident

loading on either MP2 EDG is 2821 kVA (2370 kW @ 0.84 pf). Thus, the MP3 SBO DG has the capacity and capability to provide a source of temporary power to MP2. The MP3 SBO DG will be verified to be available as a temporary power source by energizing MP2 bus 24E from the MP3 SBO DG and ensuring proper phase rotation (phasing) with the MP2 electrical distribution system by "bumping" a motor on this bus. These two tests are sufficient to show that the MP3 SBO DG is available to serve as a temporary diesel generator for compensatory measures.

Additionally, NNECO has evaluated the dominant sequences affecting plant risk using probabilistic safety analysis techniques. The top 25 core damage sequences are provided in Attachments 6 and 7. The analysis assumed that the alternate source of offsite power would be inoperable for 7 days, and the swing bus 24E would be inoperable for 72 hours of those 7 days. The Delta Core Damage Probability (ΔCDP) was determined to be 1.75E-06. This increase in risk is conservative given the conservatism regarding the emergency diesel generator mission times as identified by the PRA peer review and internal assessments. From sensitivity calculations which vary the DG mission times, NNECO believes that the actual ΔCDP associated with the evolution is most likely below 1E-06. In addition, the risk of extending the AOT from 7 days to 14 days was considered negligible, assuming that NNECO establishes, within 7 days of entering Action a. of TS 3.8.1.1, the capability to supply MP2 with power from the MP3 SBO DG via operator actions within one hour of an event resulting in the loss of the remaining offsite circuit. The capability to utilize the MP3 SBO DG is a contingency measure (i.e., will be able to serve as a temporary diesel).

The one time extension to the AOT of Action a.2 of MP2 TS 3.8.1.1 will not adversely impact the health and safety of the public because the increased risk is acceptable, focus on maintaining the operability of the redundant equipment and systems will be increased, the probable weather conditions will be appropriately considered, and the capability to supply MP2 with power from the MP3 SBO DG via operator action will be established within 7 days of entering Action a. of TS 3.8.1.1.

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Attachment 2

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Significant Hazards Consideration

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Significant Hazards Consideration

Description of License Amendment Request

The proposed change will extend the allowed outage time (AOT) for Action a.2 of Millstone Unit No. 2 (MP2) Technical Specification (TS) 3.8.1.1 from 72 hours to 14 days provided the Millstone Unit No. 3 (MP3) station blackout (SBO) diesel generator (DG) is available to supply MP2, otherwise the AOT can only be extended to 7 days. This is a one time extension required to support the replacement of the MP2 4.16 kV cross-tie from Millstone Unit No. 1 (MP1) with one from MP3. This modification is being made due to the decommissioning of MP1.

Basis for No Significant Hazards Consideration

In accordance with 10 CFR 50.92, Northeast Nuclear Energy Company (NNECO) has reviewed the proposed change and has concluded that it does not involve a Significant Hazards Consideration (SHC). The basis for this conclusion is that the three criteria of 10 CFR 50.92(c) are not compromised. The proposed change does not involve an SHC because the change would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   The offsite circuits supply power to equipment required to support the safe shutdown and post-accident operations of MP2. The preferred off-site power supply is from the 345 kV switchyard, through the reserve station service transformer (RSST). The alternate (delayed) source of offsite power is the 4.16 kV cross-tie from MP1 via bus 14H.

   To ensure that the probability of a complete loss of offsite power is not significantly increased, the MP1 4.16 kV cross-tie will only be removed from service when the weather conditions and forecast are favorable. Additionally, during the time that the alternate offsite source is inoperable, actions will be taken to protect the operable offsite circuit (i.e., no work will be conducted that could challenge the operability of the offsite circuit).

   Although the offsite circuits provide power to components that help mitigate the consequences of accidents previously evaluated, the extension in the AOT does not affect any of the assumptions used in the deterministic evaluations of these accidents. Thus, this change will not increase the consequences of any accident previously analyzed.

   Based on the above, the proposed change does not involve a significant increase in the probability or consequences of an accident previously analyzed.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed change is an extension to a TS AOT. It does not alter the physical design, configuration, or method of operation of the plant. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously analyzed.

3. Involve a significant reduction in a margin of safety.

   During the implementation of the modification to provide MP2 with a 4.16 kV cross-tie with MP3, NNECO will:

   a. Appropriately consider the 7 day and 14 day weather forecasts prior to removing the MP2 4.16 kV cross-tie with MP1 from service to minimize the potential for loss of offsite power due to severe weather or salt spray.

   b. Protect the equipment redundant to the systems removed from service or whose power supply is affected by the modification. This includes limiting work on the 345 kV lines, the switchyard, the RSST, the diesel generators, the service water system, the high pressure safety injection system, and the reactor building closed cooling water system. This restriction will ensure that MP2 will remain capable of mitigating any potential design basis accident during the implementation of the modification.

   c. Within 7 days of entering Action a. of TS 3.8.1.1, establish the capability to supply MP2 with power from the MP3 SBO DG via operator actions within one hour of an event resulting in a loss of the remaining offsite source of power. The capability to utilize the MP3 SBO DG is a contingency measure (i.e., will be able to serve as a temporary diesel).

   Additionally, NNECO has evaluated the dominant sequences affecting plant risk using probabilistic safety analysis techniques. The analysis determined that the Delta Core Damage Probability associated with the extended allowed outage time was small.

   There will be no significant reduction in a margin of safety because the increased risk is acceptable, focus on maintaining the operability of the redundant equipment and systems will be increased, the probable weather conditions will be appropriately considered, and the capability to supply MP2 with power from the MP3 SBO DG via operator action will be established within 7 days of entering Action a. of TS 3.8.1.1. The capability to utilize the MP3 SBO DG is a contingency measure (i.e., will be able to serve as a temporary diesel).

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Attachment 3

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Marked Up Pages

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and

b. Two separate and independent diesel generators each with a separate fuel oil supply tank containing a minimum of 12,000 gallons of fuel.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Inoperable Equipment	Required Action
a. One offsite circuit	a.1 Perform Surveillance Requirement 4.8.1.1.1 for remaining offsite circuit within 1 hour and at least once per 8 hours thereafter. AND a.2 Restore the inoperable offsite circuit to OPERABLE status within 72 hours (*) or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
b. One diesel generator	b.1 Perform Surveillance Requirement 4.8.1.1.1 for the offsite circuits within 1 hour and at least once per 8 hours thereafter. AND b.2 Demonstrate OPERABLE diesel generator is not inoperable due to common cause failure within 24 hours or perform Surveillance Requirement 4.8.1.1.2.a.2 for the OPERABLE diesel generator within 24 hours. AND b.3 Restore the inoperable diesel generator to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

* Except that once during the implementation of the MP2 4.16 kV cross-tie with MP3, the 72-hour allowed outage time can be extended to 14 days provided the MP3 station blackout diesel generator is available to supply MP2, otherwise the allowed outage time can only be extended to 7 days.

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Attachment 4

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Retyped Pages

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and

b. Two separate and independent diesel generators each with a separate fuel oil supply tank containing a minimum of 12,000 gallons of fuel.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Inoperable Equipment	Required Action
a. One offsite circuit	a.1 Perform Surveillance Requirement 4.8.1.1.1 for remaining offsite circuit within 1 hour and at least once per 8 hours thereafter. AND a.2 Restore the inoperable offsite circuit to OPERABLE status within 72 hours* or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
b. One diesel generator	b.1 Perform Surveillance Requirement 4.8.1.1.1 for the offsite circuits within 1 hour and at least once per 8 hours thereafter. AND b.2 Demonstrate OPERABLE diesel generator is not inoperable due to common cause failure within 24 hours or perform Surveillance Requirement 4.8.1.1.2.a.2 for the OPERABLE diesel generator within 24 hours. AND b.3 Restore the inoperable diesel generator to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

*Except that once during the implementation of the MP2 4.16 kV cross-tie with MP3, the 72-hour allowed outage time can be extended to 14 days provided the MP3 station blackout diesel generator is available to supply MP2, otherwise the allowed outage time can only be extended to 7 days.

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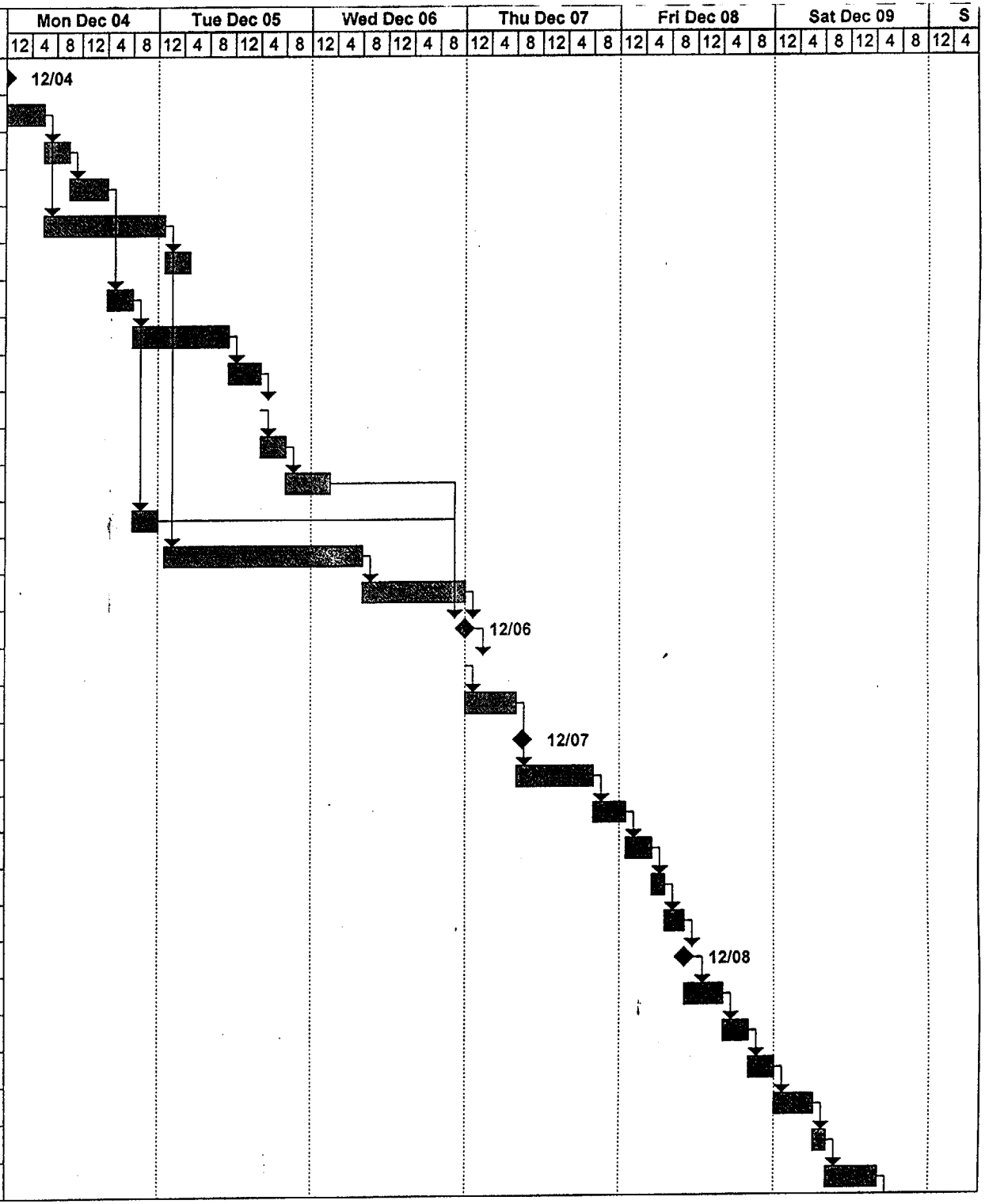
Attachment 5

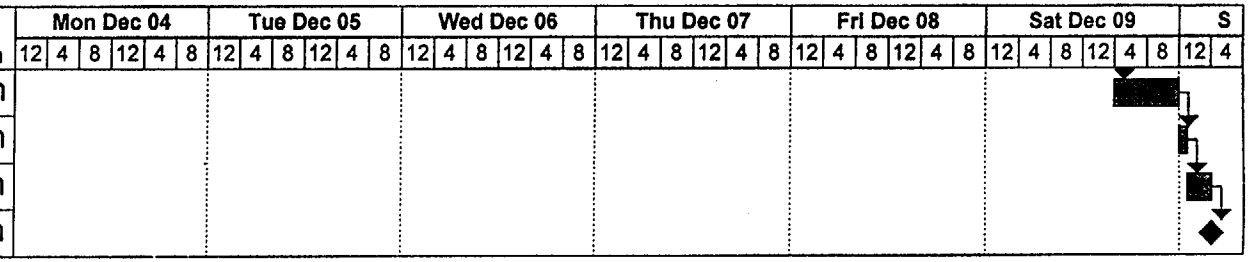
Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Schedule for Modification

ID	Task Name	Duration
1	**INSTALLATION**	0d
2	Remove breaker and ground cub.	6h
3	Open helb/fire seal in breaker A505	4h
4	Remove MP1 power cables @ A505	4h
5	Remove MP1 wire and controls @ A505	18h
6	Patch board/fill/paint	4h
7	Pull in power cables	4h
8	Tape and Prep. cable	16h
9	Hi-pot cable	2h
10	Term power cable	2h
11	Ductor connections	1h
12	Tape power connections	10h
13	Seal helb/fire penetration in A505	4h
14	Wire in new controls/relays	30h
15	Red-line (wire checks) testing	12h
16	Contruction Finish	0h
17	ENG release to test (form 3-2H)	3h
18	Tagging work as required for testing	8h
19	**TESTING**	0h
20	Phase check cables	8h
21	SBODG-24E ener. voltage phase test	8h
22	Isolate 24E bus from MP2	4h
23	Energize 24E from SBODG	2h
24	Bump SW pump on 24E	3h
25	SBODG avail. as a temp. diesel for MP2	0h
26	Run SW pump from 24E	3h
27	De-energize bus & open A505	4h
28	Re-energize bus from 24C or D	6h
29	Parallel 3 MVA from SBODG to 24E	6h
30	Secure SBO diesel generator	2h
31	Isolate 24E bus from MP2	4h



ID	Task Name	Duration
32	Supply power from bus 34A	8h
33	Supply power from bus 34B	4h
34	ENG release to OPS (form 3-2I)	3h
35	MP2 GDC17 2nd source returned	0h



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Attachment 6

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Top 25 Core Damage Sequences Associated with the
Alternate Source of Offsite Power and Bus 24E Being Out of Service

Bus 24E OOS

Cutsets with Descriptions Report

COREDAMAGE = 1.62E-04

Top 25 CDRE Damage Cutsets (sequences)

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
1	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.84E-05
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
2	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	1.17E-05
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
3	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	6.99E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54W	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - WEAHTER		7.58E-01	7.58E-01	
4	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	6.41E-06
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
5	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	4.08E-06
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
6	%LNPGR	LOSS OF NORMAL POWER - GRID RELATED		3.10E-03	3.10E-03	2.46E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54GR	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - GRID		4.48E-01	4.48E-01	
7	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	2.43E-06
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54W	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - WEAHTER		7.58E-01	7.58E-01	

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
8	%GPT	GENERAL PLANT TRANSIENT		2.43E+00	2.43E+00	1.75E-06
	MTC	PROBABILITY OF AN ADVERSE MTC WITH TURBINE TRIP		5.00E-02	5.00E-02	
	RTELEC	REACTOR TRIP FAILURE (SIGNAL, COILS, BREAKER)		1.44E-05	1.44E-05	
9	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.69E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW2AVSW231FF	AIR OPERATED VALVE SW-231B FAILS TO CLOSE ON DEMAND (DIESEL BYPASS V	1.02E-02	1.00E+00	1.02E-02	
10	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.69E-06
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW1AVSW231FF	AIR OPERATED VALVE SW-231A FAILS TO CLOSE ON DEMAND (DIESEL 'A' BYPA	1.02E-02)	1.00E+00	1.02E-02	
11	%GPT	GENERAL PLANT TRANSIENT		2.43E+00	2.43E+00	1.45E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC3TR15G22FN	RSST 15G-22S FAILS TO OPERATE	2.00E-06	2.40E+01	4.80E-05	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
12	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.33E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BNN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
13	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.33E-06
	AC1DGDGH7ANN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
14	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.29E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW2AVSW89BNN	AIR OPERATED VALVE SW-89B FAILS TO OPEN ON DEMAND (DIESEL OUTLET VAL	7.80E-03	1.00E+00	7.80E-03	
15	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.29E-06
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW1AVSW89ANN	AIR OPERATED VALVE SW-89A FAILS TO OPEN ON DEMAND (DIESEL 'A' OUTLET	7.80E-03	1.00E+00	7.80E-03	

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
16	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	1.07E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW2AVSW231FF	AIR OPERATED VALVE SW-231B FAILS TO CLOSE ON DEMAND (DIESEL BYPASS V	1.02E-02	1.00E+00	1.02E-02	
17	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	1.07E-06
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW1AVSW231FF	AIR OPERATED VALVE SW-231A FAILS TO CLOSE ON DEMAND (DIESEL 'A' BYPA	1.02E-02)	1.00E+00	1.02E-02	
18	%LNPGR	LOSS OF NORMAL POWER - GRID RELATED		3.10E-03	3.10E-03	8.56E-07
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54GR	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - GRID		4.48E-01	4.48E-01	
19	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.45E-07
	AC1DGDGH7ANN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
20	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.45E-07
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BNN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
21	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	8.25E-07
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	OATDAFW	OPERATOR FAILS TO START THE TERRY TURBINE (P4)		6.40E-03	6.40E-03	
22	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.22E-07
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW2AVSW89BNN	AIR OPERATED VALVE SW-89B FAILS TO OPEN ON DEMAND (DIESEL OUTLET VAL	7.80E-03	1.00E+00	7.80E-03	
23	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.22E-07
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5BSBS24EFN	ELECTRICAL BUS 24E FAULT	1.00E-07	2.40E+01	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW1AVSW89ANN	AIR OPERATED VALVE SW-89A FAILS TO OPEN ON DEMAND (DIESEL 'A' OUTLET	7.80E-03	1.00E+00	7.80E-03	
24	%LDCA	LOSS OF 125VDC BUS 201A (PLANT-SPECIFIC DATA)		2.50E-02	2.50E-02	7.18E-07
	FW2MOD1	'B' MOTOR DRIVEN AFW PUMP FAILS		4.02E-03	4.02E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	OARDC2	OPERATOR FAILS TO RECOVER DC POWER (OARDC AND OARDC1)		5.00E-02	5.00E-02	

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
25	%LDCB	LOSS OF 125VDC BUS 201B (PLANT SPECIFIC DATA)		2.50E-02	2.50E-02	7.18E-07
	FW1MOD1	'A' MOTOR DRIVEN AFW PUMP FAILS		4.02E-03	4.02E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	OARDC2	OPERATOR FAILS TO RECOVER DC POWER (OARDC AND OARDC1)		5.00E-02	5.00E-02	

Report Summary:

Filename: R:\SHARED\MP2UP1\XITE\XTIEMRGS.CUT
Print date: 06/28/1900 2:30 PM
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Docket No. 50-336
B18205

Attachment 7

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
Top 25 Core Damage Sequences Associated with the
Alternate Source of Offsite Power Being Out of Service

Cross-tie OOS

Cutsets with Descriptions Report

COREDAMAGE = 1.54E-04

Top 25 CORE Damage Cutsets (Sequences)

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
1	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.84E-05
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
2	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	1.17E-05
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
3	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	6.99E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54W	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - WEAHTER		7.58E-01	7.58E-01	
4	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	6.41E-06
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
5	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	4.08E-06
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
6	%LNPGR	LOSS OF NORMAL POWER - GRID RELATED		3.10E-03	3.10E-03	2.46E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54GR	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - GRID		4.48E-01	4.48E-01	
7	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	2.43E-06
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54W	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - WEAHTER		7.58E-01	7.58E-01	

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
8	%GPT	GENERAL PLANT TRANSIENT		2.43E+00	2.43E+00	1.75E-06
	MTC	PROBABILITY OF AN ADVERSE MTC WITH TURBINE TRIP		5.00E-02	5.00E-02	
	RTELEC	REACTOR TRIP FAILURE (SIGNAL, COILS, BREAKER)		1.44E-05	1.44E-05	
9	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.69E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIE00SQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW2AVSW231FF	AIR OPERATED VALVE SW-231B FAILS TO CLOSE ON DEMAND (DIESEL BYPASS V	1.02E-02	1.00E+00	1.02E-02	
10	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.69E-06
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIE00SQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW1AVSW231FF	AIR OPERATED VALVE SW-231A FAILS TO CLOSE ON DEMAND (DIESEL 'A' BYPA	1.02E-02)	1.00E+00	1.02E-02	
11	%GPT	GENERAL PLANT TRANSIENT		2.43E+00	2.43E+00	1.45E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC3TR15G22FN	RSST 15G-22S FAILS TO OPERATE	2.00E-06	2.40E+01	4.80E-05	
	AC5XTIE00SQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
12	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.33E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BNN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC5XTIE00SQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
13	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.33E-06
	AC1DGDGH7ANN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIE00SQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
14	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.29E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIE00SQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW2AVSW89BNN	AIR OPERATED VALVE SW-89B FAILS TO OPEN ON DEMAND (DIESEL OUTLET VAL	7.80E-03	1.00E+00	7.80E-03	
15	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	1.29E-06
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIE00SQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	SW1AVSW89ANN	AIR OPERATED VALVE SW-89A FAILS TO OPEN ON DEMAND (DIESEL 'A' OUTLET	7.80E-03	1.00E+00	7.80E-03	

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
16	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	1.07E-06
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW2AVSW231FF	AIR OPERATED VALVE SW-231B FAILS TO CLOSE ON DEMAND (DIESEL BYPASS V	1.02E-02	1.00E+00	1.02E-02	
17	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	1.07E-06
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW1AVSW231FF	AIR OPERATED VALVE SW-231A FAILS TO CLOSE ON DEMAND (DIESEL 'A' BYPA	1.02E-02)	1.00E+00	1.02E-02	
18	%LNPGR	LOSS OF NORMAL POWER - GRID RELATED		3.10E-03	3.10E-03	8.56E-07
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	ACCDGDH7ABFN	COMMON CAUSE FAILURE TO RUN OF DIESEL 'A' AND 'B'	4.64E-03	6.19E-01	4.31E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	SITE54GR	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - GRID		4.48E-01	4.48E-01	
19	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.45E-07
	AC1DGDGH7ANN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
20	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.45E-07
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BNN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO START ON DEMAND	8.02E-03	1.00E+00	8.02E-03	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
21	%LNPPC	LOSS OF NORMAL POWER - PLANT CENTERED		2.25E-02	2.25E-02	8.25E-07
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE54PC	FAILURE TO RECOVER OFFSITE POWER IN 54 MINUTES - PLANT CENTERED		4.62E-01	4.62E-01	
	OATDAFW	OPERATOR FAILS TO START THE TERRY TURBINE (P4)		6.40E-03	6.40E-03	
22	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.22E-07
	AC1DGDGH7AFN	DIESEL GENERATOR 'A' (15G-12U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW2AVSW89BNN	AIR OPERATED VALVE SW-89B FAILS TO OPEN ON DEMAND (DIESEL OUTLET VAL	7.80E-03	1.00E+00	7.80E-03	
23	%LNPW	LOSS OF NORMAL POWER - WEATHER RELATED		5.20E-03	5.20E-03	8.22E-07
	AC2DGDGH7BFN	DIESEL GENERATOR 'B' (15G-13U) FAILS TO RUN	4.64E-03	2.40E+01	1.11E-01	
	AC5XTIEOOSQ	MP1 CROSSTIE TO 24E OUT-OF-SERVICE (SCREENING)		1.00E+00	1.00E+00	
	SITE13W	FAILURE TO RECOVER OFFSITE POWER IN 13 HOURS - WEATHER RELATED		1.82E-01	1.82E-01	
	SW1AVSW89ANN	AIR OPERATED VALVE SW-89A FAILS TO OPEN ON DEMAND (DIESEL 'A' OUTLET	7.80E-03	1.00E+00	7.80E-03	
24	%LDCA	LOSS OF 125VDC BUS 201A (PLANT-SPECIFIC DATA)		2.50E-02	2.50E-02	7.18E-07
	FW2MOD1	'B' MOTOR DRIVEN AFW PUMP FAILS		4.02E-03	4.02E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	OARDC2	OPERATOR FAILS TO RECOVER DC POWER (OARDC AND OARDC1)		5.00E-02	5.00E-02	

#	Inputs	Description	Rate	Exposure	Event Prob	Probability
25	%LDCB	LOSS OF 125VDC BUS 201B (PLANT SPECIFIC DATA)		2.50E-02	2.50E-02	7.18E-07
	FW1MOD1	'A' MOTOR DRIVEN AFW PUMP FAILS		4.02E-03	4.02E-03	
	FWXMOD1	FAILURE OF TERRY TURBINE		1.43E-01	1.43E-01	
	OARDC2	OPERATOR FAILS TO RECOVER DC POWER (OARDC AND OARDC1)		5.00E-02	5.00E-02	

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B18205

Attachment 8

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-15-00
One Time Allowed Outage Time Extension for Action a.2 of TS 3.8.1.1
List of Regulatory Commitments

Attachment 8
List of Regulatory Commitments

The following table identifies actions committed to by NNECO in this document.

Number	Commitments	Due
B18205-01	Appropriately consider the 7 day and 14 day weather forecasts to minimize the potential for loss of offsite power due to severe weather or salt spray.	Prior to removing the MP2 4.16 kV cross-tie with MP1 from service.
B18205-02	Protect the equipment redundant to the systems removed from service or whose power supply is affected by this modification. This includes limiting work on the 345 kV lines, the switchyard, the RSST, the diesel generators, the service water system, the high pressure safety injection system, and the reactor building closed cooling water system. This restriction will ensure that MP2 will remain capable of mitigating any potential design basis accident during the implementation of the modification.	Immediately prior to and during the work to replace the MP1 to MP2 cross-tie with the MP3 to MP2 cross-tie.
B18205-03	Establish the capability to supply MP2 with power from the MP3 SBO DG via operator actions within one hour of an event resulting in a loss of the remaining offsite source of power. The MP3 SBO DG will be verified to be available as a temporary power source by energizing MP2 bus 24E from the MP3 SBO DG and ensuring proper phase rotation (phasing) with the MP2 electrical distribution system by "bumping" a motor on this bus. These two tests are sufficient to show that the MP3 SBO DG is available to serve as a temporary diesel generator for compensatory measures.	Within 7 days of entering Action a. of TS 3.8.1.1 as a result of the modification to replace the MP1 to MP2 cross-tie with the MP3 to MP2 cross-tie.