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Serial: RA-18-0079

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Renewed Facility Operating License Nos. DPR-71 and DPR-62
Docket Nos. 50-325 and 50-324
Application to Revise Technical Specifications to Adopt TSTF-439, "Eliminate
Second Completion Times Limiting Time From Discovery of Failure To Meet an
LCO"

Ladies and Gentlemen:

Pursuant to 10 CFR 50.90, Duke Energy Progress, LLC (Duke Energy), is submitting a request for an amendment to the Technical Specifications (TS) for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2.

The proposed change, consistent with previously NRC-approved Technical Specification Task Force Traveler 439 (TSTF-439), deletes second Completion Times from the affected Required Actions contained in TS, along with removing the example contained in TS Section 1.3 and adding a discussion about alternating between Conditions.

Additionally, the proposed LAR will make an administrative revision to TS 3.8.1 by removing an obsolete note associated with Condition 3.8.1.D and Surveillance Requirements 3.8.1.2, 3.8.1.3, and 3.8.1.7.

The Enclosure provides a description and assessment of the proposed changes. The existing TS pages, for Units 1 and 2, marked to show the proposed changes are included as Attachment 1 and 2 of the Enclosure, respectively. The revised (i.e., typed) TS pages are included as Attachment 3 and 4, for Unit 1 and 2, respectively. Attachment 5 provides the existing Unit 1 TS Bases pages marked to show the proposed changes for information only.

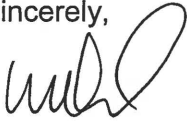
Approval of the proposed amendment is requested one year from completion of the NRC acceptance review. Once approved, the amendment shall be implemented within 120 days. In accordance with 10 CFR 50.91, Duke Energy is providing a copy of the proposed license amendment to the designated representative for the State of North Carolina.

This document contains no regulatory commitments.

Please refer any questions regarding this submittal to Mr. Lee Grzeck, Manager - Regulatory Affairs, at (910) 832-2487.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on August 14, 2018.

Sincerely,

A handwritten signature in black ink, appearing to read 'WRG', with a large, stylized loop at the end.

William R. Gideon

WRG/mkb

Enclosure:

- Description and Assessment of the Proposed Change
- Attachment 1. Proposed Technical Specifications Changes (Mark-Up) - Unit 1
- Attachment 2. Proposed Technical Specifications Changes (Mark-Up) - Unit 2
- Attachment 3. Revised Technical Specifications Pages - Unit 1
- Attachment 4. Revised Technical Specifications Pages - Unit 2
- Attachment 5. Proposed Technical Specification Bases Changes (Mark-Up) - Unit 1 (For Information Only)

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Description and Assessment of the Proposed Change

Subject: Application to Revise Technical Specifications to Adopt TSTF-439, "Eliminate Second Completion Times Limiting Time From Discovery of Failure To Meet an LCO"

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- 1. Proposed Technical Specifications Changes (Mark-Up) - Unit 1
- 2. Proposed Technical Specifications Changes (Mark-Up) - Unit 2
- 3. Revised (Typed) Technical Specifications Pages - Unit 1
- 4. Revised (Typed) Technical Specifications Pages - Unit 2
- 5. Proposed Technical Specification Bases Changes (Mark-Up) - Unit 1 (For Information Only)

Description and Assessment

1.0 Summary Description

This evaluation supports a request to amend the Renewed Operating License Nos. DPR-71 and DPR-62 for Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, respectively.

The proposed change, consistent with the NRC-approved Technical Specification Task Force Traveler 439 (TSTF-439), Revision 2 (i.e., Reference 6.1), deletes second Completion Times from the affected Required Actions contained in Technical Specifications (TS). Specifically, TS 3.7.2 Required Actions B.1, C.2, and E.1; and TS 3.8.1 Required Actions B.3, C.3, and D.5; TS 3.8.7 Required Actions A.1, B.1, C.4, and D.1. In addition, the description and example on second Completion Times contained in TS Section 1.3 will be deleted and modified consistent with TSTF-439, Revision 2. Plant-specific variations from the model TSTF are discussed in detail below.

TSTF-439, Revision 2, "Eliminate Second Completion Times Limiting Time From Discovery of Failure To Meet an LCO," was approved by the NRC on January 11, 2006.

2.0 Detailed Description

2.1 Description of Proposed Change

The guidance of NUREG-1433, Revision 1, "Standard Technical Specifications General Electric Plants, BWR/4," (i.e., Reference 6.2) was used to convert BSEP standard TSs (STS) to the improved TSs (ITS), which was issued as amendments 203 and 233 for BSEP Unit Nos. 1 and 2, respectively, on June 5, 1998 (i.e., Reference 6.3). The ITS conversion introduced a second Completion Time for certain TS Required Actions that establish a limit on the maximum allowed for any combination of Conditions that result in a single continuous failure to meet the LCO. These Completion Times, henceforth referred to as "second Completion Times," are joined by an "AND" logical connector to the Condition-specific Completion Time and state "X days from discovery of failure to meet the LCO," where "X" varies by specification. The intent of the second Completion Time was to preclude entry into and out of the ACTIONS for an indefinite period without meeting the LCO by providing a limit on the amount of time that the LCO could not be met for various combinations of Conditions.

After the ITS conversion, a BSEP-specific amendment was issued for TS 3.8.1, "AC Sources – Operating," and TS 3.8.7, "Distribution Systems – Operating," as amendments 205 and 235 for BSEP Units 1 and 2, respectively, on April 15, 1999. Due to the shared configuration of the BSEP electrical distribution systems, these amendments introduced new TS Conditions (i.e., only applicable with one unit operating and the other unit shutdown) to allow extended Completion Times necessary to allow performance of preventive maintenance on buses, transformers, breakers, and other related electrical equipment in the shutdown unit. The Completion Times for these conditions also introduced plant-specific second Completion Times.

Consistent with TSTF-439, the proposed change, (1) removes all second Completion Times contained in the BSEP TSs and, (2) modifies Completion Times Example 1.3-3 to eliminate the second Completion Times contained within and revises the discussion in the Example to state that alternating between Conditions in such a manner that operation could continue indefinitely

without ever restoring systems to meet the LCO is inconsistent with the bases of the Completion Times and is inappropriate.

Associated TS Bases are also being revised to delete the discussion of the second Completion Times. Marked-up and revised TS and TS Bases pages are included as Attachments 1 through 5 of the Enclosure.

2.2 Description of Variances

Duke Energy is proposing the following variances from the TS changes described in TSTF-439. These variations do not affect the applicability of TSTF-439 to the proposed license amendment. The justifications for deleting second Completion Times provided in TSTF-439, as accepted by the NRC, are applicable to the following BSEP changes not within the scope of TSTF-439.

BSEP Variances		
TSTF-439 Change	BSEP Change	Explanation
TS 3.1.7, Required Action A.1 Concentration of boron in solution not within limits.	N/A	BSEP TSs do not include a condition associated with boron concentration not within limits.
TS 3.1.7, Required Action B.1 One SLC subsystem inoperable.	N/A	The Completion Time for the equivalent BSEP TS Required Action (i.e., TS 3.1.7 Required Action A.1) does not include a second Completion Time.
N/A	TS 3.7.2, Required Action B.1 One required Nuclear Service Water (NSW) pump inoperable.	The second Completion Time was added to the BSEP TSs as part of the conversion to ITS. NUREG-1433, Revision 1 did not contain a second Completion Time within this specific section, however, BSEP adopted this more restrictive change.
N/A	TS 3.7.2, Required Action C.3 One required Conventional Service Water (CSW) pump inoperable.	The second Completion Time was added to the BSEP TSs as part of the conversion to ITS. NUREG-1433, Revision 1 did not contain a second Completion Time within this specific section, however, BSEP adopted this more restrictive change.

BSEP Variances		
TSTF-439 Change	BSEP Change	Explanation
N/A	TS 3.7.2, Required Action E.1 Two required CSW pumps inoperable.	The second Completion Time was added to the BSEP TSs as part of the conversion to ITS. NUREG-1433, Revision 1 did not contain a second Completion Time within this specific section, however, BSEP adopted this more restrictive change.
N/A	TS 3.8.1, Required Action B.3 Plant-specific Condition B is used for planned maintenance on a shutdown unit's BOP buses and the associated 4.16 kV emergency bus. In order to perform maintenance on the 4.16 kV emergency bus, the associated diesel generator (DG) must be rendered inoperable.	After the ITS conversion, a BSEP-specific amendment was issued for TS 3.8.1, "AC Sources – Operating," and TS 3.8.7, "Distribution Systems – Operating," as amendments 205 and 235 for BSEP Units 1 and 2, respectively, on April 15, 1999. Due to the shared configuration of the BSEP electrical distribution systems, these amendments introduced new TS Conditions (i.e., only applicable with one unit operating and the other unit shutdown) to allow extended Completions Times necessary to allow performance of preventive maintenance on buses, transformers, breakers, and other related electrical equipment in the shutdown unit. The Completion Times for these conditions also introduced plant-specific second Completion Times.
TS 3.8.1, Required Action A.3 One required offsite circuit inoperable.	TS 3.8.1, Required Action C.3 One required offsite circuit inoperable.	Numbering difference only.
TS 3.8.1, Required Action B.4. One required DG inoperable.	TS 3.8.1, Required Action D.5. One required DG inoperable.	Numbering difference only.

BSEP Variances		
TSTF-439 Change	BSEP Change	Explanation
N/A	TS 3.8.7, Required Action A.1 One AC electrical power distribution subsystem inoperable for planned maintenance due to either inoperable load group E3 bus(es) or inoperable load group E4 bus(es).	After the ITS conversion, a BSEP-specific amendment was issued for TS 3.8.1, "AC Sources – Operating," and TS 3.8.7, "Distribution Systems – Operating," as amendments 205 and 235 for BSEP Units 1 and 2, respectively, on April 15, 1999. Due to the shared configuration of the BSEP electrical distribution systems, these amendments introduced new TS Conditions (i.e., only applicable with one unit operating and the other unit shutdown) to allow extended Completion Times necessary to allow performance of preventive maintenance on buses, transformers, breakers, and other related electrical equipment in the shutdown unit. The Completion Times for these conditions also introduced plant-specific second Completion Times.
TS 3.8.9, Required Action A.1 One or more AC electrical power distribution subsystems inoperable.	TS 3.8.7, Required Action B.1 One or more AC electrical power distribution subsystems inoperable for reasons other than Condition A.	Numbering difference only.
TS 3.8.9, Required Action B.1 One or more AC vital buses inoperable.	N/A	BSEP TSs do not include a condition associated with AC vital buses inoperable.
TS 3.8.9, Required Action C.1 One or more station service DC electrical distribution subsystems inoperable.	TS 3.8.7, Required Action C.4 One or more DC electrical power distribution subsystems inoperable due to loss of normal DC source.	Numbering difference only.

BSEP Variances		
TSTF-439 Change	BSEP Change	Explanation
N/A	TS 3.8.7, Required Action D.1 One or more DC electrical power distribution subsystems inoperable for reasons other than Condition C.	The onsite DC electrical power distribution system is divided into redundant and independent DC electrical power distribution subsystems, due to the unique shared electrical system at BSEP. Because each DC subsystem can be powered by a normal and alternate DC source, this specific TS Required Action covers the loss of one or more DC electrical power distribution subsystems for reasons other than the loss of the normal DC source (i.e., TS 3.8.7, Required Action C.4).

2.3 Administrative Changes

The administrative changes requested by this amendment are to delete two obsolete notes associated with TS Required Action 3.8.1.D, and Surveillance Requirements (SR) 3.8.1.2, 3.8.1.3, and 3.8.1.7. The note associated with TS Required Action 3.8.1.D states, "Until DG 4 is returned to operable status, not to exceed 0745 EST on December 13, 2017, the 14 day and 17 day Completion Times are extended to 30 days and 33 days, respectively." The note associated with TS SRs 3.8.1.2, 3.8.1.3, and 3.8.1.7 states, "Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, performance of SR 3.8.1.'X' for EDGs 1, 2, and 3 may be suspended. Past due surveillances will be completed within 7 days of restoration of EDG 4 operability or December 20, 2017, whichever occurs first." All of the SR notes read the same except for the 'X' above, which designates the specific SR the note is associated with. Both notes were added as part of an Emergency LAR dated November 22, 2017 and approved on November 26, 2017 as Amendments 282 and 310 for Unit 1 and 2, respectively.

3.0 Technical Evaluation

As discussed in TSTF-439, Revision 2, the adoption of a second Completion Time was based on an NRC concern that a plant could continue to operate indefinitely with an LCO governing safety significant systems never being met by alternately meeting the requirements of separate Conditions. In 1991, there was no regulatory requirement or program which could prevent this misuse of the TS. However, that is no longer the case. With the promulgation of the Maintenance Rule, implementation of the Reactor Oversight Process, and the inclusion of administrative controls as discussed herein, there would exist strong disincentive to continued operation with concurrent multiple inoperabilities of the type the second Completion Times were designed to prevent.

Maintenance Rule

10 CFR 50.65 (a)(1), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants" (i.e., the Maintenance Rule), requires each licensee to monitor the performance or condition of SSCs against licensee-established goals to ensure that the SSCs are capable of fulfilling their intended functions. If the performance or condition of an SSC does not meet established goals, appropriate corrective action is required to be taken. The NRC Resident Inspectors monitor the licensee's Corrective Action Program (CAP) and could take action if the licensee's maintenance program allowed the systems required by a single LCO to become concurrently inoperable multiple times. The performance and condition monitoring activities required by 10 CFR 50.65 (a)(1) and (a)(2) would identify if poor maintenance practices resulted in multiple entries into the ACTIONS of the TS and unacceptable unavailability of these SSCs. The effectiveness of these performance monitoring activities, and associated corrective actions, is evaluated at least every refueling cycle, not to exceed 24 months per 10 CFR 50.65 (a)(3).

Under the TS, the Completion Time for one system is not affected by other inoperable equipment. The second Completion Times were an attempt to influence the Completion Time for one system based on the condition of another system, if the two systems were required by the same LCO. However, 10 CFR 50.65(a)(4) is a much better mechanism to apply this influence as the Maintenance Rule considers all inoperable risk-significant equipment, not just the one or two systems governed by the same LCO.

Under 10 CFR 50.65(a)(4), the risk impact of all inoperable risk-significant equipment is assessed and managed when performing preventative or corrective maintenance. The risk assessments are conducted using the procedures and guidance endorsed by Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." (i.e., Reference 6.4) Regulatory Guide 1.160 endorses the Revision 4A of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," (i.e., Reference 6.5). These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to:

- plan and conduct other activities in a manner that controls overall risk,
- increased risk awareness by shift and management personnel,
- reduce the duration of the condition,
- minimize the magnitude of risk increases through the establishment of backup success paths or compensatory measures,
- and determination that the proposed maintenance is acceptable.

This comprehensive program provides much greater assurance of safe plant operation than the second Completion Times in the TS.

Reactor Oversight Process

Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," describes the tracking and reporting of performance indicators to support the NRC's Reactor Oversight Process (ROP), (i.e., Reference 6.6). The NEI document is endorsed by Regulatory Issue Summary (RIS) 2001-11, "Voluntary Submission of Performance Indicator Data," (i.e., Reference 6.7). NEI 99-02, Section 2.2, describes the Mitigating Systems

Cornerstone. NEI 99-02 specifically addresses Emergency AC Sources, which encompasses the AC Sources and Distribution System LCOs, and the Cooling Water Systems, which encompasses the BSEP NSW and CSW System LCOs. Extended unavailability of these systems due to multiple entries into the ACTIONS would affect the NRC's evaluation of the licensee's performance under the ROP.

Administrative Controls

In addition to these programs, a requirement is added to Section 1.3 of the TS to require licensees to have administrative controls to limit the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO. These administrative controls should consider plant risk and shall limit the maximum contiguous time of failing to meet the LCO. This TS requirement, when considered with the regulatory processes discussed above, provide an equivalent or superior level of plant safety without the unnecessary complication of the TS by second Completion Times on some Specifications. Furthermore, Duke Energy will revise 0OI-01.01, "BNP Conduct of Operations Supplement," to implement the guidance contained in TSTF-439, Revision 2. Specifically:

It is possible to alternate between Technical Specification Conditions in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. However, doing so would be inconsistent with the basis of the Completion Times. Therefore, the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO shall be limited. The Completion Times for those Conditions shall not be inappropriately extended.

0OI-01.01 provides guidance for documenting the entrance into TS Actions when an applicable LCO is not met, LCO re-assignment, and LCO cancellation. This change will be part of the implementation process for this TS change.

In conclusion, the proposed changes, although with variances, fall within the scope of this TSTF and the justification is also applicable. The added Service Water system is monitored under both the Maintenance Rule and the Reactor Oversight Process Performance Indicators as one of the five Mitigating System Performance Index (MSPI) systems. The unavailability and reliability of the system is monitored monthly and results provided to the NRC quarterly.

4.0 Regulatory Analysis

4.1 Applicable Regulatory Requirements/Criteria

The following NRC requirements are applicable to the proposed change.

Title 10 Code of Federal Regulations 50.36(c)(2)

The regulations of Title 10 of the Code of Federal Regulations (10 CFR), "Technical Specifications," establish the requirements related to the content of the TS. Section 50.36(c)(2) states:

When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

Title 10 Code of Federal Regulations 50.65

The regulations of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," establish a performance-based rule to ensure that nuclear power plant structures, systems, and components (SSCs) will be maintained so that they will perform their intended function when required.

The proposed changes continue to meet the requirements of these regulations.

4.2 No Significant Hazards Consideration Analysis

Duke Energy Progress, LLC (Duke Energy), requests adoption of Technical Specification Task Force (TSTF) Traveler TSTF-439, "Eliminate Second Completion Times Limiting Time From Discovery of Failure To Meet an LCO," which is an approved change to the Standard Technical Specifications (STS), into the Brunswick Steam Electric Plant (BSEP), Units 1 and 2, Technical Specifications (TS). The proposed change deletes second Completion Times from the affected Required Actions contained in TS, along with removing the example contained in TS Section 1.3 and adding a discussion about alternating between Conditions. These changes are consistent with NRC-approved Traveler TSTF-439, Revision 2.

Duke Energy has evaluated whether a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change eliminates second Completion Times from the Technical Specifications. Completion Times are not an initiator to any accident previously evaluated. The consequences of an accident during the revised Completion Time are no different than the consequences of the same accident during the existing Completion Times. As a result, the probability and consequences of an accident previously evaluated are not affected by this change. The proposed change does not alter or prevent the ability of systems, structures, and components (SSCs) from performing their intended function to mitigate the consequences of an initiating event within the assumed acceptance limits. The proposed change does not affect the source term, containment isolation, or radiological release assumptions used in evaluating the radiological consequences of an accident previously evaluated. Further, the proposed change does not increase the types or amounts of radioactive effluent that may be released offsite nor significantly increase individual or cumulative occupational/public radiation exposures. The proposed change is consistent with the safety analysis assumptions and resultant consequences.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change does not involve a physical alteration to the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The proposed change will not alter the design function, nor create new failure mechanisms, malfunctions, or accident initiators for the equipment related to the TS being altered.

Thus, based on the above, this change does not create the possibility of a new or different kind of accident from an accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change to delete the second Completion Time does not alter the manner in which safety limits, limiting safety system settings, or limited conditions for operation are determined. The safety analysis acceptance criteria are not affected by this change. The proposed change will not result in plant operation in a configuration outside of the design basis.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Duke Energy concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.3 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the NRC regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 Environmental Evaluation

The proposed change would alter a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

6.0 References

- 6.1 Letter from the TSTF to the NRC, "TSTF-439, Revision 2, 'Eliminate Second Completion Times Limiting Time From Discovery of Failure To Meet an LCO'", dated June 20, 2005, ADAMS Accession No. ML051860296.
- 6.2 NUREG-1433, Revision 1, "Standard Technical Specifications General Electric Plants, BWR/4," dated April 1995, ADAMS Accession No. ML13196A477.
- 6.3 Letter from David C. Trimble (NRC) to C.S. Hinnant (CP&L), Issuance of Amendment No. 203 to Facility Operating License No. DPR-71 and Amendment No. 233 to Facility Operating License No. DPR-62 Regarding Conversion to Improved Standard Technical Specifications and Implementation of Reactor Stability Solution – Brunswick Steam Electric Plant, Units 1 and 2 (TAC Nos. M97243 and M97244), dated June 5, 1998, ADAMS Accession No. 9806180104.
- 6.4 U.S. Nuclear Regulatory Commission Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," dated May 2012, ADAMS Accession No. ML113610098
- 6.5 Nuclear Energy Institute (NEI), NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants", Revision 4A, April 26, 2011, ADAMS Accession No. ML11116A198.
- 6.6 NEI Guideline, NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, ADAMS Accession No. ML13261A116.
- 6.7 NRC Regulatory Issue Summary (RIS), RIS 2001-11, "Voluntary Submission of Performance Indicator Data", dated May 11, 2001, ADAMS Accession No. ML011240144.

Proposed Technical Specifications Changes (Mark-Up) - Unit 1

1.3 Completion Times

DESCRIPTION (continued)	<p>The above Completion Time extension does not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each division, subsystem, component or variable expressed in the Condition) and separate tracking of Completion Times based on this re-entry. These exceptions are stated in individual Specifications.</p> <p>The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery . . ." Example 1.3 3 illustrates one use of this type of Completion Time. The 10 day Completion Time specified for Condition A and B in Example 1.3 3 may not be extended.</p>
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EXAMPLES

The following examples illustrate the use of Completion Times with different types of Conditions and changing Conditions.

EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours
	<u>AND</u> B.2 Be in MODE 4.	36 hours

Condition B has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition B is entered.

(continued)

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Function X subsystem inoperable.	A.1 Restore Function X subsystem to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
B. One Function Y subsystem inoperable.	B.1 Restore Function Y subsystem to OPERABLE status.	72 hours AND 10 days from discovery of failure to meet the LCO
C. One Function X subsystem inoperable. <u>AND</u> One Function Y subsystem inoperable.	C.1 Restore Function X subsystem to OPERABLE status. <u>OR</u> C.2 Restore Function Y subsystem to OPERABLE status.	12 hours 12 hours

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

When one Function X subsystem and one Function Y subsystem are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each subsystem, starting from the time each subsystem was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second subsystem was declared inoperable (i.e., the time the situation described in Condition C was discovered).

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. The remaining Completion Time in Condition A is measured from the time the affected subsystem was declared inoperable (i.e., initial entry into Condition A).

~~The Completion Times of Conditions A and B are modified by a logical connector, with a separate 10 day Completion Time measured from the time it was discovered the LCO was not met. In this example, without the separate Completion Time, it would be possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. The separate Completion Time modified by the phrase "from discovery of failure to meet the LCO" is designed to prevent indefinite continued operation while not meeting the LCO. This Completion Time allows for an exception to the normal "time zero" for beginning the Completion Time "clock". In this instance, the Completion Time "time zero" is specified as commencing at the time the LCO was initially not met, instead of at the time the associated Condition was entered.~~

(continued)

INSERT:

It is possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. However, doing so would be inconsistent with the basis of the Completion Times. Therefore, there shall be administrative controls to limit the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO. These administrative controls shall ensure that the Completion Times for those Conditions are not inappropriately extended.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One required NSW pump inoperable for reasons other than Condition A.	<p>B.1</p> <p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.1 for DGs made inoperable by NSW. -----</p> <p>Restore required NSW pump to OPERABLE status.</p>	<p>7 days</p> <p><u>AND</u></p> <p>14 days from discovery of failure to meet LCO</p>
C. One required conventional service water (CSW) pump inoperable.	<p>C.1</p> <p>Verify the one OPERABLE CSW pump and one OPERABLE Unit 1 NSW pump are powered from separate 4.16 kV emergency buses.</p> <p><u>AND</u></p> <p>C.2</p> <p>Restore required CSW pump to OPERABLE status.</p>	<p>Immediately</p> <p>7 days</p> <p><u>AND</u></p> <p>14 days from discovery of failure to meet LCO</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action C.1 and associated Completion Time not met.	D.1 Restore required CSW pump to OPERABLE status.	72 hours
E. Two required CSW pumps inoperable.	<p>E.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.7.1, "Residual Heat Removal Service Water (RHRSW) System," for RHRSW subsystems made inoperable by CSW. -----</p> <p>Restore one required CSW pump to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>14 days from discovery of failure to meet LCO</p>
<p>F. One required NSW pump inoperable.</p> <p><u>AND</u></p> <p>One required CSW pump inoperable.</p>	<p>F.1 Restore required NSW pump to OPERABLE status.</p> <p><u>OR</u></p> <p>F.2 Restore required CSW pump to OPERABLE status.</p>	<p>72 hours</p> <p>72 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTES-----</p> <p>1. Only applicable when Unit 2 is in MODE 4 or 5.</p> <p>2. Condition B shall not be entered in conjunction with Condition A.</p> <p>-----</p> <p>Two Unit 2 offsite circuits inoperable due to one Unit 2 balance of plant circuit path to the downstream 4.16 kV emergency bus inoperable for planned maintenance.</p> <p><u>AND</u></p> <p>DG associated with the affected downstream 4.16 kV emergency bus inoperable for planned maintenance.</p>	<p>B.1 Declare required feature(s) with no power available inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p> <p>B.2 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).</p> <p><u>AND</u></p> <p>B.3 Restore both Unit 2 offsite circuits and DG to OPERABLE status.</p>	<p>Immediately from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>2 hours</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p> <p>7 days</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet LCO 3.8.1.a or b</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One offsite circuit inoperable for reasons other than Condition A or B.	C.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).	2 hours <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> C.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable.	24 hours from discovery of no offsite power to one 4.16 kV emergency bus concurrent with inoperability of redundant required feature(s)
	<u>AND</u> C.3 Restore offsite circuit to OPERABLE status.	72 hours <u>AND</u> 17 days from discovery of failure to meet LCO 3.8.1.a or b

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.5 Restore DG to OPERABLE status.	<p>NOTE Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, the 14 day and 17 day Completion Times are extended to 30 days and 33 days, respectively.</p> <p>7 days from discovery of unavailability of SUPP-DG</p> <p><u>AND</u></p> <p>24 hours from discovery of Condition D entry \geq 6 days concurrent with unavailability of SUPP-DG</p> <p><u>AND</u></p> <p>14 days</p> <p><u>AND</u></p> <p>17 days from discovery of failure to meet LCO 3.8.1.a or b</p>

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each offsite circuit.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.2	<p>-----NOTES-----</p> <ol style="list-style-type: none"> All DG starts may be preceded by an engine prelube period. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. A single test at the specified Frequency will satisfy this Surveillance for both units. Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, performance of SR 3.8.1.2 for EDGs 1, 2, and 3 may be suspended. Past due surveillances will be completed within 7 days of restoration of EDG 4 operability or December 20, 2017, whichever occurs first. <p>-----</p> <p>Verify each DG starts from standby conditions and achieves steady state voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.3 -----NOTES-----</p> <ol style="list-style-type: none"> DG loadings may include gradual loading. Momentary transients outside the load range do not invalidate this test. This Surveillance shall be conducted on only one DG at a time. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. A single test at the specified Frequency will satisfy this Surveillance for both units. Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, performance of SR 3.8.1.3 for EDGs 1, 2, and 3 may be suspended. Past due surveillances will be completed within 7 days of restoration of EDG 4 operability or December 20, 2017, whichever occurs first. <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2800 kW and ≤ 3500 kW.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.4 Verify each engine mounted tank contains ≥ 150 gal of fuel oil.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.5 Check for and remove accumulated water from each engine mounted tank.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.6</p> <hr/> <p style="text-align: center;">NOTE</p> <p>Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, performance of SR 3.8.1.6 for EDGs 1, 2, and 3 may be suspended. Past due surveillances will be completed within 7 days of restoration of EDG 4 operability or December 20, 2017, whichever occurs first.</p> <hr/> <p>Verify the fuel oil transfer system operates to transfer fuel oil from the day fuel oil storage tank to the engine mounted tank.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.7</p> <hr/> <p style="text-align: center;">NOTES</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. A single test at the specified Frequency will satisfy this Surveillance for both units. <hr/> <p>Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 3750 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems—Operating

LCO 3.8.7 Division I and Division II AC and DC electrical power distribution subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One AC electrical power distribution subsystem inoperable for planned maintenance due to either inoperable load group E3 bus(es) or inoperable load group E4 bus(es).	A.1 Restore affected load group bus(es) to OPERABLE status.	7 days AND 176 hours from discovery of failure to meet the LCO
B. One or more AC electrical power distribution subsystems inoperable for reasons other than Condition A.	B.1 Restore AC electrical power distribution subsystems to OPERABLE status.	8 hours AND 176 hours from discovery of failure to meet LCO

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more DC electrical power distribution subsystems inoperable due to loss of normal DC source.	C.1 Declare required feature(s), supported by the inoperable DC electrical power distribution subsystem, inoperable.	Immediately
	<u>AND</u>	
	C.2 Initiate action to transfer DC electrical power distribution subsystem to its alternate DC source.	Immediately
	<u>AND</u>	
	C.3 Declare required feature(s) supported by the inoperable DC electrical power distribution subsystem OPERABLE.	Upon completion of transfer of the required feature's DC electrical power distribution subsystem to its OPERABLE alternate DC source
	<u>AND</u>	
	C.4 Restore DC electrical power distribution subsystem to OPERABLE status.	7 days
		<u>AND</u> 176 hours from discovery of failure to meet the LCO

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more DC electrical power distribution subsystems inoperable for reasons other than Condition C.	D.1 Restore DC electrical power distribution subsystems to OPERABLE status.	7 days AND 176 hours from discovery of failure to meet LCO
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
F. Two or more electrical power distribution subsystems inoperable that result in a loss of function.	F.1 Enter LCO 3.0.3.	Immediately

Proposed Technical Specifications Changes (Mark-Up) - Unit 2

1.3 Completion Times

DESCRIPTION (continued)

The above Completion Time extension does not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each division, subsystem, component or variable expressed in the Condition) and separate tracking of Completion Times based on this re-entry. These exceptions are stated in individual Specifications.

The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery . . ." ~~Example 1.3-3 illustrates one use of this type of Completion Time. The 10 day Completion Time specified for Condition A and B in Example 1.3-3 may not be extended.~~

EXAMPLES

The following examples illustrate the use of Completion Times with different types of Conditions and changing Conditions.

EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	12 hours
	<u>AND</u>		
	B.2	Be in MODE 4.	36 hours

Condition B has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition B is entered.

(continued)

1.3 Completion Times

EXAMPLES
(continued)

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Function X subsystem inoperable.	A.1 Restore Function X subsystem to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
B. One Function Y subsystem inoperable.	B.1 Restore Function Y subsystem to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO
C. One Function X subsystem inoperable. <u>AND</u> One Function Y subsystem inoperable.	C.1 Restore Function X subsystem to OPERABLE status. <u>OR</u> C.2 Restore Function Y subsystem to OPERABLE status.	12 hours 12 hours

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

When one Function X subsystem and one Function Y subsystem are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each subsystem, starting from the time each subsystem was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second subsystem was declared inoperable (i.e., the time the situation described in Condition C was discovered).

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. The remaining Completion Time in Condition A is measured from the time the affected subsystem was declared inoperable (i.e., initial entry into Condition A).

~~The Completion Times of Conditions A and B are modified by a logical connector, with a separate 10 day Completion Time measured from the time it was discovered the LCO was not met. In this example, without the separate Completion Time, it would be possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. The separate Completion Time modified by the phrase "from discovery of failure to meet the LCO" is designed to prevent indefinite continued operation while not meeting the LCO. This Completion Time allows for an exception to the normal "time zero" for beginning the Completion Time "clock". In this instance, the Completion Time "time zero" is specified as commencing at the time the LCO was initially not met, instead of at the time the associated Condition was entered.~~

(continued)

INSERT:

It is possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. However, doing so would be inconsistent with the basis of the Completion Times. Therefore, there shall be administrative controls to limit the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO. These administrative controls shall ensure that the Completion Times for those Conditions are not inappropriately extended.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One required NSW pump inoperable for reasons other than Condition A.	<p>B.1</p> <p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.1 for DGs made inoperable by NSW. -----</p> <p>Restore required NSW pump to OPERABLE status.</p>	<p>7 days</p> <p><u>AND</u></p> <p>14 days from discovery of failure to meet LCO</p>
C. One required conventional service water (CSW) pump inoperable.	<p>C.1</p> <p>Verify the one OPERABLE CSW pump and one OPERABLE Unit 2 NSW pump are powered from separate 4.16 kV emergency buses.</p> <p><u>AND</u></p> <p>C.2</p> <p>Restore required CSW pump to OPERABLE status.</p>	<p>Immediately</p> <p>7 days</p> <p><u>AND</u></p> <p>14 days from discovery of failure to meet LCO</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action C.1 and associated Completion Time not met.	D.1 Restore required CSW pump to OPERABLE status.	72 hours
E. Two required CSW pumps inoperable.	<p>E.1</p> <p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.7.1, "Residual Heat Removal Service Water (RHRSW) System," for RHRSW subsystems made inoperable by CSW. -----</p> <p>Restore one required CSW pump to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>14 days from discovery of failure to meet LCO</p>
<p>F. One required NSW pump inoperable.</p> <p><u>AND</u></p> <p>One required CSW pump inoperable.</p>	<p>F.1 Restore required NSW pump to OPERABLE status.</p> <p><u>OR</u></p> <p>F.2 Restore required CSW pump to OPERABLE status.</p>	<p>72 hours</p> <p>72 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTES-----</p> <p>1. Only applicable when Unit 1 is in MODE 4 or 5.</p> <p>2. Condition B shall not be entered in conjunction with Condition A.</p> <p>-----</p> <p>Two Unit 1 offsite circuits inoperable due to one Unit 1 balance of plant circuit path to the downstream 4.16 kV emergency bus inoperable for planned maintenance.</p> <p><u>AND</u></p> <p>DG associated with the affected downstream 4.16 kV emergency bus inoperable for planned maintenance.</p>	<p>B.1 Declare required feature(s) with no power available inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p> <p>B.2 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).</p> <p><u>AND</u></p> <p>B.3 Restore both Unit 1 offsite circuits and DG to OPERABLE status.</p>	<p>Immediately from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>2 hours</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p> <p>7 days</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet LCO 3.8.1.a or b</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One offsite circuit inoperable for reasons other than Condition A or B.	C.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).	2 hours <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> C.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable.	24 hours from discovery of no offsite power to one 4.16 kV emergency bus concurrent with inoperability of redundant required feature(s)
	<u>AND</u> C.3 Restore offsite circuit to OPERABLE status.	72 hours <u>AND</u> 17 days from discovery of failure to meet LCO 3.8.1.a or b

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.5 Restore DG to OPERABLE status.	<p>NOTE Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, the 14 day and 17 day Completion Times are extended to 30 days and 33 days, respectively.</p> <p>7 days from discovery of unavailability of SUPP-DG</p> <p><u>AND</u></p> <p>24 hours from discovery of Condition D entry \geq 6 days concurrent with unavailability of SUPP-DG</p> <p><u>AND</u></p> <p>14 days</p> <p><u>AND</u></p> <p>17 days from discovery of failure to meet LCO 3.8.1.a or b</p>

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each offsite circuit.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.2	<p>-----NOTES-----</p> <ol style="list-style-type: none"> All DG starts may be preceded by an engine prelube period. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. A single test at the specified Frequency will satisfy this Surveillance for both units. Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, performance of SR 3.8.1.2 for EDGs 1, 2, and 3 may be suspended. Past due surveillances will be completed within 7 days of restoration of EDG 4 operability or December 20, 2017, whichever occurs first. <p>-----</p> <p>Verify each DG starts from standby conditions and achieves steady state voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	<p>In accordance with the Surveillance Frequency Control Program</p> <p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> DG loadings may include gradual loading. Momentary transients outside the load range do not invalidate this test. This Surveillance shall be conducted on only one DG at a time. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. A single test at the specified Frequency will satisfy this Surveillance for both units. Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, performance of SR 3.8.1.3 for EDGs 1, 2, and 3 may be suspended. Past due surveillances will be completed within 7 days of restoration of EDG 4 operability or December 20, 2017, whichever occurs first. <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2800 kW and ≤ 3500 kW.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.4	Verify each engine mounted tank contains ≥ 150 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.5	Check for and remove accumulated water from each engine mounted tank.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.6</p> <hr/> <p style="text-align: center;">NOTE</p> <p>Until DG 4 is returned to OPERABLE status, not to exceed 0745 EST on December 13, 2017, performance of SR 3.8.1.6 for EDGs 1, 2, and 3 may be suspended. Past due surveillances will be completed within 7 days of restoration of EDG 4 operability or December 20, 2017, whichever occurs first.</p> <hr/> <p>Verify the fuel oil transfer system operates to transfer fuel oil from the day fuel oil storage tank to the engine mounted tank.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.7</p> <hr/> <p style="text-align: center;">NOTES</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. A single test at the specified Frequency will satisfy this Surveillance for both units. <hr/> <p>Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 3750 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems—Operating

LCO 3.8.7 Division I and Division II AC and DC electrical power distribution subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One AC electrical power distribution subsystem inoperable for planned maintenance due to either inoperable load group E1 bus(es) or inoperable load group E2 bus(es).	A.1 Restore affected load group bus(es) to OPERABLE status.	7 days AND 176 hours from discovery of failure to meet the LCO
B. One or more AC electrical power distribution subsystems inoperable for reasons other than Condition A.	B.1 Restore AC electrical power distribution subsystems to OPERABLE status.	8 hours AND 176 hours from discovery of failure to meet LCO

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more DC electrical power distribution subsystems inoperable due to loss of normal DC source.	C.1 Declare required feature(s), supported by the inoperable DC electrical power distribution subsystem, inoperable.	Immediately
	<u>AND</u>	
	C.2 Initiate action to transfer DC electrical power distribution subsystem to its alternate DC source.	Immediately
	<u>AND</u>	
	C.3 Declare required feature(s) supported by the inoperable DC electrical power distribution subsystem OPERABLE.	Upon completion of transfer of the required feature's DC electrical power distribution subsystem to its OPERABLE alternate DC source
	<u>AND</u>	
	C.4 Restore DC electrical power distribution subsystem to OPERABLE status.	7 days <u>AND</u> 176 hours from discovery of failure to meet the LCO

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more DC electrical power distribution subsystems inoperable for reasons other than Condition C.	D.1 Restore DC electrical power distribution subsystems to OPERABLE status.	7 days AND 176 hours from discovery of failure to meet LCO
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
F. Two or more electrical power distribution subsystems inoperable that result in a loss of function.	F.1 Enter LCO 3.0.3.	Immediately

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1.3 Completion Times

DESCRIPTION (continued)	<p>The above Completion Time extension does not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each division, subsystem, component or variable expressed in the Condition) and separate tracking of Completion Times based on this re-entry. These exceptions are stated in individual Specifications.</p> <p>The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery . . ."</p>
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EXAMPLES	<p>The following examples illustrate the use of Completion Times with different types of Conditions and changing Conditions.</p>
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EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours
	<u>AND</u> B.2 Be in MODE 4.	36 hours

Condition B has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition B is entered.

(continued)

1.3 Completion Times

EXAMPLES
(continued)

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One Function X subsystem inoperable.	A.1	Restore Function X subsystem to OPERABLE status.	7 days
B. One Function Y subsystem inoperable.	B.1	Restore Function Y subsystem to OPERABLE status.	72 hours
C. One Function X subsystem inoperable. <u>AND</u> One Function Y subsystem inoperable.	C.1 <u>OR</u> C.2	Restore Function X subsystem to OPERABLE status. Restore Function Y subsystem to OPERABLE status.	12 hours 12 hours

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

When one Function X subsystem and one Function Y subsystem are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each subsystem, starting from the time each subsystem was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second subsystem was declared inoperable (i.e., the time the situation described in Condition C was discovered).

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. The remaining Completion Time in Condition A is measured from the time the affected subsystem was declared inoperable (i.e., initial entry into Condition A).

It is possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. However, doing so would be inconsistent with the basis of the Completion Times. Therefore, there shall be administrative controls to limit the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO. These administrative controls shall ensure that the Completion Times for those Conditions are not inappropriately extended.

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One required NSW pump inoperable for reasons other than Condition A.	<p>B.1</p> <p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.1 for DGs made inoperable by NSW. -----</p> <p>Restore required NSW pump to OPERABLE status.</p>	7 days
C. One required conventional service water (CSW) pump inoperable.	<p>C.1</p> <p>Verify the one OPERABLE CSW pump and one OPERABLE Unit 1 NSW pump are powered from separate 4.16 kV emergency buses.</p> <p><u>AND</u></p> <p>C.2</p> <p>Restore required CSW pump to OPERABLE status.</p>	<p>Immediately</p> <p>7 days</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action C.1 and associated Completion Time not met.	D.1 Restore required CSW pump to OPERABLE status.	72 hours
E. Two required CSW pumps inoperable.	<p>E.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.7.1, "Residual Heat Removal Service Water (RHRSW) System," for RHRSW subsystems made inoperable by CSW. -----</p> <p>Restore one required CSW pump to OPERABLE status.</p>	72 hours
<p>F. One required NSW pump inoperable.</p> <p><u>AND</u></p> <p>One required CSW pump inoperable.</p>	<p>F.1 Restore required NSW pump to OPERABLE status.</p> <p><u>OR</u></p> <p>F.2 Restore required CSW pump to OPERABLE status.</p>	<p>72 hours</p> <p>72 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTES-----</p> <p>1. Only applicable when Unit 2 is in MODE 4 or 5.</p> <p>2. Condition B shall not be entered in conjunction with Condition A.</p> <p>-----</p> <p>Two Unit 2 offsite circuits inoperable due to one Unit 2 balance of plant circuit path to the downstream 4.16 kV emergency bus inoperable for planned maintenance.</p> <p><u>AND</u></p> <p>DG associated with the affected downstream 4.16 kV emergency bus inoperable for planned maintenance.</p>	<p>B.1 Declare required feature(s) with no power available inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p> <p>B.2 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).</p> <p><u>AND</u></p> <p>B.3 Restore both Unit 2 offsite circuits and DG to OPERABLE status.</p>	<p>Immediately from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>2 hours</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p> <p>7 days</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One offsite circuit inoperable for reasons other than Condition A or B.	C.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).	2 hours
	<u>AND</u>	<u>AND</u>
	C.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable.	Once per 12 hours thereafter
	<u>AND</u>	
	C.3 Restore offsite circuit to OPERABLE status.	24 hours from discovery of no offsite power to one 4.16 kV emergency bus concurrent with inoperability of redundant required feature(s)
		72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.5 Restore DG to OPERABLE status.	7 days from discovery of unavailability of SUPP-DG <u>AND</u> 24 hours from discovery of Condition D entry \geq 6 days concurrent with unavailability of SUPP-DG <u>AND</u> 14 days
E. Two or more offsite circuits inoperable for reasons other than Condition B.	E.1 Declare required feature(s) inoperable when the redundant required feature(s) are inoperable. <u>AND</u> E.2 Restore all but one offsite circuit to OPERABLE status.	12 hours from discovery of Condition E concurrent with inoperability of redundant required feature(s) 24 hours

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each offsite circuit.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.2	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. 3. A single test at the specified Frequency will satisfy this Surveillance for both units. <p>-----</p> <p>Verify each DG starts from standby conditions and achieves steady state voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> DG loadings may include gradual loading. Momentary transients outside the load range do not invalidate this test. This Surveillance shall be conducted on only one DG at a time. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. A single test at the specified Frequency will satisfy this Surveillance for both units. <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2800 kW and ≤ 3500 kW.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.4	Verify each engine mounted tank contains ≥ 150 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.5	Check for and remove accumulated water from each engine mounted tank.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.6	Verify the fuel oil transfer system operates to transfer fuel oil from the day fuel oil storage tank to the engine mounted tank.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.7	<p>-----NOTES-----</p> <ol style="list-style-type: none"> All DG starts may be preceded by an engine prelube period. A single test at the specified Frequency will satisfy this Surveillance for both units. <p>-----</p> <p>Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 3750 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	In accordance with the Surveillance Frequency Control Program

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems—Operating

LCO 3.8.7 Division I and Division II AC and DC electrical power distribution subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One AC electrical power distribution subsystem inoperable for planned maintenance due to either inoperable load group E3 bus(es) or inoperable load group E4 bus(es).	A.1 Restore affected load group bus(es) to OPERABLE status.	7 days
B. One or more AC electrical power distribution subsystems inoperable for reasons other than Condition A.	B.1 Restore AC electrical power distribution subsystems to OPERABLE status.	8 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more DC electrical power distribution subsystems inoperable due to loss of normal DC source.	C.1 Declare required feature(s), supported by the inoperable DC electrical power distribution subsystem, inoperable.	Immediately
	<u>AND</u>	
	C.2 Initiate action to transfer DC electrical power distribution subsystem to its alternate DC source.	Immediately
	<u>AND</u>	
	C.3 Declare required feature(s) supported by the inoperable DC electrical power distribution subsystem OPERABLE.	Upon completion of transfer of the required feature's DC electrical power distribution subsystem to its OPERABLE alternate DC source
	<u>AND</u>	
	C.4 Restore DC electrical power distribution subsystem to OPERABLE status.	7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more DC electrical power distribution subsystems inoperable for reasons other than Condition C.	D.1 Restore DC electrical power distribution subsystems to OPERABLE status.	7 days
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
F. Two or more electrical power distribution subsystems inoperable that result in a loss of function.	F.1 Enter LCO 3.0.3.	Immediately

Revised Technical Specifications Pages - Unit 2

1.3 Completion Times

DESCRIPTION (continued)

The above Completion Time extension does not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each division, subsystem, component or variable expressed in the Condition) and separate tracking of Completion Times based on this re-entry. These exceptions are stated in individual Specifications.

The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery . . ."

EXAMPLES

The following examples illustrate the use of Completion Times with different types of Conditions and changing Conditions.

EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours
	<u>AND</u> B.2 Be in MODE 4.	36 hours

Condition B has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition B is entered.

(continued)

1.3 Completion Times

EXAMPLES
(continued)

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Function X subsystem inoperable.	A.1 Restore Function X subsystem to OPERABLE status.	7 days
B. One Function Y subsystem inoperable.	B.1 Restore Function Y subsystem to OPERABLE status.	72 hours
C. One Function X subsystem inoperable. <u>AND</u> One Function Y subsystem inoperable.	C.1 Restore Function X subsystem to OPERABLE status. <u>OR</u> C.2 Restore Function Y subsystem to OPERABLE status.	12 hours 12 hours

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

When one Function X subsystem and one Function Y subsystem are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each subsystem, starting from the time each subsystem was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second subsystem was declared inoperable (i.e., the time the situation described in Condition C was discovered).

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. The remaining Completion Time in Condition A is measured from the time the affected subsystem was declared inoperable (i.e., initial entry into Condition A).

It is possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. However, doing so would be inconsistent with the basis of the Completion Times. Therefore, there shall be administrative controls to limit the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO. These administrative controls shall ensure that the Completion Times for those Conditions are not inappropriately extended.

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One required NSW pump inoperable for reasons other than Condition A.	<p>B.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.1 for DGs made inoperable by NSW. -----</p> <p>Restore required NSW pump to OPERABLE status.</p>	7 days
C. One required conventional service water (CSW) pump inoperable.	<p>C.1 Verify the one OPERABLE CSW pump and one OPERABLE Unit 2 NSW pump are powered from separate 4.16 kV emergency buses.</p> <p><u>AND</u></p> <p>C.2 Restore required CSW pump to OPERABLE status.</p>	<p>Immediately</p> <p>7 days</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action C.1 and associated Completion Time not met.	D.1 Restore required CSW pump to OPERABLE status.	72 hours
E. Two required CSW pumps inoperable.	<p>E.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.7.1, "Residual Heat Removal Service Water (RHRSW) System," for RHRSW subsystems made inoperable by CSW. -----</p> <p>Restore one required CSW pump to OPERABLE status.</p>	72 hours
F. One required NSW pump inoperable. <u>AND</u> One required CSW pump inoperable.	<p>F.1 Restore required NSW pump to OPERABLE status.</p> <p><u>OR</u></p> <p>F.2 Restore required CSW pump to OPERABLE status.</p>	<p>72 hours</p> <p>72 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTES-----</p> <p>1. Only applicable when Unit 1 is in MODE 4 or 5.</p> <p>2. Condition B shall not be entered in conjunction with Condition A.</p> <p>-----</p> <p>Two Unit 1 offsite circuits inoperable due to one Unit 1 balance of plant circuit path to the downstream 4.16 kV emergency bus inoperable for planned maintenance.</p> <p><u>AND</u></p> <p>DG associated with the affected downstream 4.16 kV emergency bus inoperable for planned maintenance.</p>	<p>B.1 Declare required feature(s) with no power available inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p> <p>B.2 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).</p> <p><u>AND</u></p> <p>B.3 Restore both Unit 1 offsite circuits and DG to OPERABLE status.</p>	<p>Immediately from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>2 hours</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p> <p>7 days</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One offsite circuit inoperable for reasons other than Condition A or B.	C.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).	2 hours
	<u>AND</u>	<u>AND</u>
	C.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable.	Once per 12 hours thereafter
	<u>AND</u>	
	C.3 Restore offsite circuit to OPERABLE status.	24 hours from discovery of no offsite power to one 4.16 kV emergency bus concurrent with inoperability of redundant required feature(s)
		72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.5 Restore DG to OPERABLE status.	7 days from discovery of unavailability of SUPP-DG <u>AND</u> 24 hours from discovery of Condition D entry \geq 6 days concurrent with unavailability of SUPP-DG <u>AND</u> 14 days
E. Two or more offsite circuits inoperable for reasons other than Condition B.	E.1 Declare required feature(s) inoperable when the redundant required feature(s) are inoperable. <u>AND</u> E.2 Restore all but one offsite circuit to OPERABLE status.	12 hours from discovery of Condition E concurrent with inoperability of redundant required feature(s) 24 hours

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each offsite circuit.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.2	<p>-----NOTES-----</p> <ol style="list-style-type: none"> All DG starts may be preceded by an engine prelube period. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. A single test at the specified Frequency will satisfy this Surveillance for both units. <p>-----</p> <p>Verify each DG starts from standby conditions and achieves steady state voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. DG loadings may include gradual loading. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. 5. A single test at the specified Frequency will satisfy this Surveillance for both units. <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2800 kW and ≤ 3500 kW.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.4	Verify each engine mounted tank contains ≥ 150 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.5	Check for and remove accumulated water from each engine mounted tank.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.6	Verify the fuel oil transfer system operates to transfer fuel oil from the day fuel oil storage tank to the engine mounted tank.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.7	<p>-----NOTES-----</p> <ol style="list-style-type: none"> All DG starts may be preceded by an engine prelube period. A single test at the specified Frequency will satisfy this Surveillance for both units. <p>-----</p> <p>Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 3750 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 3750 V and ≤ 4300 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	In accordance with the Surveillance Frequency Control Program

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems—Operating

LCO 3.8.7 Division I and Division II AC and DC electrical power distribution subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One AC electrical power distribution subsystem inoperable for planned maintenance due to either inoperable load group E1 bus(es) or inoperable load group E2 bus(es).	A.1 Restore affected load group bus(es) to OPERABLE status.	7 days
B. One or more AC electrical power distribution subsystems inoperable for reasons other than Condition A.	B.1 Restore AC electrical power distribution subsystems to OPERABLE status.	8 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more DC electrical power distribution subsystems inoperable due to loss of normal DC source.	C.1 Declare required feature(s), supported by the inoperable DC electrical power distribution subsystem, inoperable.	Immediately
	<u>AND</u>	
	C.2 Initiate action to transfer DC electrical power distribution subsystem to its alternate DC source.	Immediately
	<u>AND</u>	
	C.3 Declare required feature(s) supported by the inoperable DC electrical power distribution subsystem OPERABLE.	Upon completion of transfer of the required feature's DC electrical power distribution subsystem to its OPERABLE alternate DC source
	<u>AND</u>	
	C.4 Restore DC electrical power distribution subsystem to OPERABLE status.	7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more DC electrical power distribution subsystems inoperable for reasons other than Condition C.	D.1 Restore DC electrical power distribution subsystems to OPERABLE status.	7 days
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
F. Two or more electrical power distribution subsystems inoperable that result in a loss of function.	F.1 Enter LCO 3.0.3.	Immediately

Proposed Technical Specification Bases Changes (Mark-Up) - Unit 1
(For Information Only)

BASES

ACTIONS A.1

___ (continued)

capability is unavailable to one or more DGs, ACTIONS for LCO 3.8.1, "AC Sources—Operating," must be immediately entered. This allows Condition A to provide requirements for an inoperable NSW pump without regard to whether a cooling water supply is available to the DGs. LCO 3.8.1 provides the appropriate restrictions for one or more inoperable DGs.

B.1

With one required NSW pump inoperable for reasons other than Condition A, one inoperable pump must be restored to OPERABLE status within 7 days and 14 days from discovery of failure to meet the LCO. With the unit in this condition, the remaining OPERABLE NSW and CSW pumps are adequate to perform the SW heat removal function. However, the overall reliability is reduced. The 7 day Completion Time is based on the remaining SW heat removal capability, a reasonable time for repairs, and the low probability of an event occurring during this time period requiring the SW System.

~~The second Completion Time for Required Action B.1 establishes a limit on the maximum time allowed for any combination of required NSW and CSW pumps to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition B is entered while, for instance, a required CSW pump is inoperable, and that CSW pump is subsequently returned OPERABLE, the LCO may already have been not met for up to 7 days. This situation could lead to a total of 14 days, since initial failure to meet the LCO, to restore the NSW pump. At this time, a required CSW pump could again become inoperable, the NSW pump restored OPERABLE, and an additional 7 days (for a total of 21 days) allowed prior to complete restoration of the LCO. The 14 day Completion Time provides a limit on the time allowed in a specified condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which Conditions B and C or Conditions B and D are entered concurrently. The "AND" connector between the 7 day and the 14 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.~~

(continued)

BASES

ACTIONS B.1

____ (continued)

~~The second Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This exception results in establishing the "time zero" at the time LCO 3.7.2 was initially not met, instead of at the time that Condition B was entered.~~

Pursuant to LCO 3.0.6, the AC Sources—Operating ACTIONS would not be entered even if cooling capability were lost to the DGs, resulting in one or more inoperable DGs. Therefore, Required Action B.1 is modified by a Note to indicate that when Condition B is entered and NSW cooling capability is unavailable to one or more DGs, ACTIONS for LCO 3.8.1, "AC Sources—Operating," must be immediately entered. This allows Condition B to provide requirements for an inoperable NSW pump without regard to whether a cooling water supply is available to the DGs. LCO 3.8.1 provides the appropriate restrictions for one or more inoperable DGs.

C.1 and C.2

With one required CSW pump inoperable, the inoperable pump must be restored to OPERABLE status within 7 days and 14 days from discovery of failure to meet the LCO. With the unit in this condition, the OPERABLE CSW pump and NSW pumps are adequate to perform the heat removal function. However, the overall reliability is reduced. The 7 day Completion Time is based on the availability of two Unit 1 SW pumps (an OPERABLE CSW pump and an OPERABLE Unit 1 NSW pump), each powered from separate 4.16 kV emergency buses, to support the unit's service water loads. Immediate verification that the OPERABLE CSW pump and one OPERABLE Unit 1 NSW pump are powered from separate emergency buses is therefore required when one required CSW pump is inoperable. If the OPERABLE CSW pump and one Unit 1 NSW pump can not be immediately verified to be powered from separate 4.16 kV emergency buses, Condition D must be immediately entered. The 7 day Completion Time is based on the remaining SW heat removal capability, a reasonable time for repairs, and the low probability of an event occurring during this time period requiring the SW System.

(continued)

BASES

ACTIONS

C.1 and C.2 (continued)

~~The second Completion Time for Required Action C.1 establishes a limit on the maximum time allowed for any combination of required NSW and CSW pumps to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition C is entered while, for instance, a required NSW pump is inoperable, and that NSW pump is subsequently returned OPERABLE, the LCO may already have been not met for up to 7 days. This situation could lead to a total of 14 days, since initial failure to meet the LCO, to restore the CSW pump. At this time, a required NSW pump could again become inoperable, the CSW pump restored OPERABLE, and an additional 7 days (for a total of 21 days) allowed prior to complete restoration of the LCO. The 14 day Completion Time provides a limit on the time allowed in a specified condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which Conditions B and C are entered concurrently. The "AND" connector between the 7 day and the 14 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met. The second Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This exception results in establishing the "time zero" at the time LCO 3.7.2 was initially not met, instead of at the time that Condition C was entered.~~

D.1

If Required Action C.1 cannot be completed within the associated Completion Time or if the status of the Unit 1 SW pumps changes after Required Action C.1 is initially met, one required CSW pump must be restored to OPERABLE status within 72 hours. With the unit in this condition, the OPERABLE SW pumps are adequate to perform the heat removal function. However, overall reliability is reduced as compared to Condition C and a reduced Completion Time of 72 hours is provided. The 72 hour Completion Time is based on the remaining SW System heat removal capability, a reasonable time for repairs, and the low probability of an event occurring during the time period requiring the SW System.

(continued)

BASES

ACTIONS E.1 (continued)

With two required CSW pumps inoperable, the one required inoperable pump must be restored to OPERABLE status within 72 hours and 14 days from discovery of failure to meet the LCO. With the unit in this condition, the OPERABLE NSW pumps are adequate to perform the heat removal function. The 72 hour Completion Time is based on the availability of the remaining NSW pumps to support the unit's service water loads. The 72 hour Completion Time is based on the remaining SW System heat removal capability, a reasonable time for repairs, and the low probability of an event occurring during this time period requiring the SW System.

~~The second Completion Time for Required Action E.1 establishes a limit on the maximum time allowed for any combination of required NSW and CSW pumps to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition E is entered while, for instance, a required NSW pump is inoperable, and that NSW pump is subsequently returned OPERABLE, the LCO may already have been not met for up to 7 days. This situation could lead to a total of 14 days, since initial failure to meet the LCO, to restore the CSW pump. At this time, a required NSW pump could again become inoperable, the CSW pump restored OPERABLE, and an additional 7 days (for a total of 21 days) allowed prior to complete restoration of the LCO. The 14 day Completion Time provides a limit on the time allowed in a specified condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which Conditions B and E are entered concurrently. The "AND" connector between the 7 day and the 14 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met. The second Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock."~~

This exception results in establishing the "time zero" at the time LCO 3.7.2 was initially not met, instead of at the time that Condition E was entered.

Pursuant to LCO 3.0.6, the RHRSW ACTIONS would not be entered even if cooling capability were lost to the RHRSW heat exchangers, resulting in one or more inoperable RHRSW subsystems. Therefore, Required

(continued)

BASES

ACTIONS B.2

___ (continued)

To ensure highly reliable power sources remain with one Unit 2 balance of plant circuit path to the downstream 4.16 kV emergency bus inoperable and the DG associated with the downstream 4.16 kV emergency bus inoperable, it is necessary to verify the availability of the remaining offsite circuits on a more frequent basis. Since the Required Action only specifies "perform," a failure of SR 3.8.1.1 acceptance criteria does not result in the Required Action not met. However, if a second circuit fails SR 3.8.1.1, the second offsite circuit is inoperable, and Condition E, for two or more offsite circuits inoperable, is entered.

B.3

This Required Action provides a 7 day time period to perform planned maintenance on one of these BOP buses and the circuit path to its associated 4.16 kV emergency bus when Unit 2 is in MODE 4 or 5. During the planned maintenance of the BOP bus, the associated emergency bus and the associated DG, if a condition is discovered on these buses or the DG requiring corrective maintenance, this maintenance may be performed within the 7 day time period of Required Action B.3. (If Unit 2 is in MODE 1, 2, or 3, then the Unit 2 ACTIONS of Specification 3.8.1, "AC Sources—Operating," require entry into LCO 3.0.3 for this condition.) The 7 day Completion Time takes into account the capacity and capability of the remaining AC sources and a reasonable time frame for performance of planned maintenance. This is acceptable because maintenance on each BOP bus and the circuit path to its associated emergency bus will increase the reliability of the offsite circuits to the downstream 4.16 kV emergency buses. It should be noted that while in this condition each of the remaining three 4.16 kV emergency buses will have their standby emergency source and two sources of offsite power OPERABLE. If one or both sources of offsite power are lost to an additional 4.16 kV emergency bus then Condition E is entered.

~~The second Completion Time for Required Action B.3 establishes a limit on the maximum time allowed for any combination of required AC power sources to be inoperable during any single contiguous occurrence of failing to meet LCO 3.8.1.a or b. If Condition B is entered while, for~~

(continued)

BASES

ACTIONS B.3

___ (continued)

~~instance, an offsite circuit is inoperable and that circuit is subsequently restored OPERABLE, the LCO may already have been not met for up to 72 hours. This situation could lead to a total of 10 days from initial failure of the LCO to restoration of the BOP circuit path to the downstream 4.16 kV emergency bus and DG associated with the affected 4.16 kV emergency bus. At this time, a second offsite circuit could again become inoperable, the BOP circuit path to the downstream 4.16 kV emergency bus and DG associated with the affected 4.16 kV emergency bus restored OPERABLE, and an additional 72 hours (for a total of 13 days) allowed prior to complete restoration of the LCO. The 10 day Completion Time provides a limit on the time allowed in a specified condition after discovery of failure to meet LCO 3.8.1.a or b. This limit is considered reasonable for situations in which Condition B and Condition C or D are entered concurrently. The "AND" connector between the 7 day and 10 day Completion Time means that both Completion Times apply simultaneously, and the more restrictive must be met.~~

~~As in Required Action B.1, the second Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock". This exception results in establishing the "time zero" at the time that LCO 3.8.1.a or b was initially not met, instead of the time that Condition B was entered.~~

C.1

To ensure a highly reliable power source remains with one offsite circuit inoperable, it is necessary to verify the availability of the remaining offsite circuits on a more frequent basis. Since the Required Action only specifies "perform," a failure of SR 3.8.1.1 acceptance criteria does not result in a Required Action not met. However, if a second circuit fails SR 3.8.1.1, the second offsite circuit is inoperable, and Condition E, for two or more offsite circuits inoperable, is entered.

(continued)

BASES

ACTIONS

C.2 (continued)

The remaining OPERABLE offsite circuits and DGs are adequate to supply electrical power to the onsite Class 1E Distribution System. Thus, on a component basis, single failure protection may have been lost for the required feature's function; however, function is not lost. The 24 hour Completion Time takes into account the component OPERABILITY of the redundant counterpart to the inoperable required feature. Additionally, the 24 hour Completion Time takes into account the capacity and capability of the remaining AC sources, a reasonable time for repairs, and the low probability of a DBA occurring during this period.

C.3

According to Regulatory Guide 1.93 (Ref. 9), operation may continue in Condition C for a period that should not exceed 72 hours. With one offsite circuit inoperable, the reliability of the offsite system is degraded, and the potential for a loss of offsite power is increased, with attendant potential for a challenge to the plant safety systems. In this condition, however, the remaining OPERABLE offsite circuits and DGs are adequate to supply electrical power to the onsite Class 1E Distribution System.

The 72 hour Completion Time takes into account the capacity and capability of the remaining AC sources, a reasonable time for repairs, and the low probability of a DBA occurring during this period.

~~The second Completion Time for Required Action C.3 establishes a limit on the maximum time allowed for any combination of required AC power sources to be inoperable during any single contiguous occurrence of failing to meet LCO 3.8.1.a or b. If Condition C is entered while, for instance, a DG is inoperable, and that DG is subsequently returned OPERABLE, the LCO may already have been not met for up to 14 days. This situation could lead to a total of 17 days, since initial failure to meet the LCO, to restore the offsite circuit. At this time, a DG could again become inoperable, the circuit restored OPERABLE, and an additional 14 days (for a total of 31 days) allowed prior to complete restoration of the LCO. The 17 day Completion Time provides a limit on the time allowed~~

(continued)

BASES

ACTIONS

C.3 (continued)

~~in a specified condition after discovery of failure to meet LCO 3.8.1.a or b. This limit is considered reasonable for situations in which Conditions C and D are entered concurrently. The "AND" connector between the 72 hours and 17 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.~~

~~As in Required Action C.2, the Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This exception results in establishing the "time zero" at the time LCO 3.8.1.a or b was initially not met, instead of at the time that Condition C was entered.~~

D.1

To ensure a highly reliable power source remains with one DG inoperable, it is necessary to verify the availability of the offsite circuits on a more frequent basis. Since the Required Action only specifies "perform," a failure to meet SR 3.8.1.1 acceptance criteria does not result in a Required Action being not met. However, if a circuit fails to pass SR 3.8.1.1, it is inoperable. Upon offsite circuit inoperability, additional Conditions must then be entered.

D.2

In order to extend the Required Action D.5 Completion Time for an inoperable DG from 7 days to 14 days inoperable, it is necessary to verify the availability of the SUPP-DG within 2 hours on entry into TS 3.8.1 LCO and every 12 hours thereafter. Since Required Action D.2 only specifies "evaluate," discovering the SUPP-DG unavailable does not result in the Required Action being not met (i.e., the evaluation is performed). However, on discovery of an unavailable SUPP-DG, the Completion Time for Required Action D.5 starts the 7 day and/or 24 hour clock.

SUPP-DG availability requires that:

- 1) The load test has been performed within 30 days of entry into the extended Completion Time. The Required Action evaluation is met with an administrative verification of this prior testing;
- 2) SUPP-DG fuel tank test is verified locally to be \geq 24-hour supply; and
- 3) SUPP-DG supporting system parameters for starting and operating are verified to be within required limits for functional availability (e.g., battery state of charge, starting air system pressure).

The SUPP-DG is not used to extend the Completion Time for more than one inoperable DG at any one time.

(continued)

BASES

ACTIONS A.1

____ (continued)

Load group E1 consists of 4.16 kV bus E1, 480 V bus E5, and 120 VAC vital bus 1E5.

Load group E2 consists of 4.16 kV bus E2, 480 V bus E6, and 120 VAC vital bus 1E6.

Load group E3 consists of 4.16 kV bus E3, 480 V bus E7, and 120 VAC vital bus 2E7.

Load group E4 consists of 4.16 kV bus E4, 480 V bus E8, and 120 VAC vital bus 2E8.

~~The second Completion Time for Required Action A.1 establishes a limit on the maximum time allowed for any combination of required distribution subsystems to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition A is entered while, for instance, an AC bus in a load group in a different division is inoperable and subsequently returned OPERABLE, this LCO may already have been not met for up to 8 hours. This situation could lead to a total duration of 176 hours (since initial failure to meet the LCO) to restore the AC Electrical Power Distribution System. At this time an AC bus in a load group in a different division could again become inoperable, and the load group removed under Condition A could be restored OPERABLE. This could continue indefinitely.~~

~~This Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock". This results in establishing the "time zero" at the time this LCO was initially not met, instead of at the time Condition A was entered. The 176 hour Completion Time is an acceptable limitation on this potential to fail to meet the LCO indefinitely.~~

If while in Condition A, emergency buses associated with another load group become inoperable (e.g., buses in load groups E3 and E4 are concurrently inoperable), Condition B and F must be entered, as appropriate.

(continued)

BASES

ACTIONS B.1 (continued)

With one or more required AC buses or distribution panels in one division inoperable for reasons other than Condition A, the remaining AC electrical power distribution subsystems are capable of supporting the minimum safety functions necessary to shut down the reactor and maintain it in a safe shutdown condition, assuming no single failure. The overall reliability is reduced, however, because a single failure in the remaining AC electrical power distribution subsystems could result in the minimum required ESF functions not being supported. Therefore, the required AC buses and distribution panels must be restored to OPERABLE status within 8 hours.

The Condition B worst scenario is one division without AC power (i.e., no offsite power to the division and the associated DG inoperable). In this Condition, the unit is more vulnerable to a complete loss of AC power. It is, therefore, imperative that the unit operators' attention be focused on minimizing the potential for loss of power to the remaining division by stabilizing the unit and restoring power to the affected division. The 8 hour time limit before requiring a unit shutdown in this Condition is acceptable because of:

- a. The potential for decreased safety if the unit operators' attention is diverted from the evaluations and actions necessary to restore power to the affected division to the actions associated with taking the unit to shutdown within this time limit.
- b. The low potential for an event in conjunction with a single failure of a redundant component in the division with AC power. (The redundant component is verified OPERABLE in accordance with Specification 5.5.11, "Safety Function Determination Program (SFDP).")

~~The second Completion Time for Required Action B.1 establishes a limit on the maximum time allowed for any combination of required distribution subsystems to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition B is entered while, for instance, a DC bus is inoperable and subsequently returned OPERABLE, this LCO~~

(continued)

BASES

ACTIONS B.1

___ (continued)

~~may already have been not met for up to 7 days. This situation could lead to a total duration of 176 hours, since initial failure to meet the LCO, to restore the AC electrical power distribution system. At this time a DC bus could again become inoperable, and the AC electrical power distribution system could be restored OPERABLE. This could continue indefinitely.~~

~~This Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This results in establishing the "time zero" at the time this LCO was initially not met, instead of at the time Condition B was entered. The 176 hour Completion Time is an acceptable limitation on this potential to fail to meet the LCO indefinitely.~~

C.1, C.2, C.3 and C.4

Condition C applies to the 125 VDC buses listed in Table B 3.8.7-1 which can be supplied from either a normal or an alternate DC source. These buses are listed below:

- a. 125 VDC Control Power Buses for 4.16 kV Switchgear E1, E2, E3, and E4;
- b. 125 VDC Control Power Buses for 480 V Switchgear E5, E6, E7, and E8;
- c. 125 VDC ESS Logic Cabinets H58, H59, H60, and H61; and
- d. 125 VDC DG Panels DG-1, DG-2, DG-3, and DG-4.

Condition A permits the de-energization of the E3 load group bus(es) or the E4 load group bus(es) for planned maintenance when Unit 2 is in MODE 4 or 5. During a 4.16 kV or 480 V bus outage it is desirable to clear both the normal and alternate sources of DC control power to the bus for personnel safety. The de-energized AC bus is inoperable and not capable of supplying its loads regardless of the availability of DC control power. Hence, entry into Condition C as a result of performing maintenance under Condition A is not necessary; Condition D would apply.

(continued)

BASES

ACTIONS

C.1, C.2, C.3 and C.4 (continued)

component and is consistent with the allowed Completion Time for an inoperable DC electrical power subsystem specified in Specification 3.8.4, "DC Sources—Operating."

~~The second Completion Time for Required Action C.4 establishes a limit on the maximum time allowed for any combination of required electrical power distribution subsystems to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition C is entered while, for instance, an AC bus is inoperable and subsequently restored OPERABLE, the LCO may already have been not met for up to 8 hours. This situation could lead to a total duration of 176 hours, since initial failure to meet the LCO, to restore the DC electrical power distribution system. At this time, an AC bus could again become inoperable, and the DC electrical power distribution system could be restored OPERABLE. This could continue indefinitely.~~

~~This Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This allowance results in establishing the "time zero" at the time the LCO was initially not met, instead of at the time Condition C was entered. The 176 hour Completion Time is an acceptable limitation on this potential of failing to meet the LCO indefinitely.~~

D.1

With one DC electrical power distribution subsystem inoperable for reasons other than Condition C, the remaining DC electrical power distribution subsystem is capable of supporting the minimum safety functions necessary to shut down the reactor and maintain it in a safe shutdown condition, assuming no single failure. The overall reliability is reduced, however, because a single failure in the remaining DC electrical power distribution subsystem could result in the minimum required ESF functions not being supported. Therefore, the required DC electrical power distribution subsystem must be restored to OPERABLE status within 7 days by powering the bus from the associated batteries or chargers.

(continued)

BASES

ACTIONS D.1

___ (continued)

Condition D represents one division without adequate DC power, potentially with both the battery(s) significantly degraded and the associated charger(s) nonfunctioning. In this situation the plant is significantly more vulnerable to a complete loss of all DC power. It is, therefore, imperative that the operator's attention focus on stabilizing the plant, minimizing the potential for loss of power to the remaining divisions, and restoring power to the affected division.

The 7 day Completion Time is consistent with the allowed Completion Time for an inoperable DC electrical power subsystem specified in Specification 3.8.4, "DC Sources—Operating". Taking exception to LCO 3.0.2 for components without adequate DC power, which would have Required Action Completion Times shorter than 7 days, is acceptable because of:

- a. The potential for decreased safety when requiring a change in plant conditions (i.e., requiring a shutdown) while not allowing stable operations to continue;
- b. The potential for decreased safety when requiring entry into numerous applicable Conditions and Required Actions for components without DC power, while not providing sufficient time for the operators to perform the necessary evaluations and actions for restoring power to the affected division;
- c. The low potential for an event in conjunction with a single failure of a redundant component.

~~The second Completion Time for Required Action D.1 establishes a limit on the maximum time allowed for any combination of required electrical power distribution subsystems to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition D is entered while, for instance, an AC bus is inoperable and subsequently restored OPERABLE, the LCO may already have been not met for up to 8 hours. This situation could lead to a total duration of 176 hours, since initial failure to meet the LCO, to restore the DC electrical power~~

(continued)

BASES

ACTIONS

D.1 (continued)

~~distribution system. At this time, an AC bus could again become inoperable, and the DC electrical power distribution system could be restored OPERABLE. This could continue indefinitely.~~

~~This Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This allowance results in establishing the "time zero" at the time the LCO was initially not met, instead of at the time Condition D was entered. The 176 hour Completion Time is an acceptable limitation on this potential of failing to meet the LCO indefinitely.~~

E.1

If the inoperable electrical power distribution subsystem(s) cannot be restored to OPERABLE status within the associated Completion Time, the unit must be brought to a MODE in which overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours.

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 4) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Required Action E.1 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 3. This Note prohibits the use of LCO 3.0.4.a to enter MODE 3 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 3, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

F.1

Condition F corresponds to a level of degradation in the electrical power distribution system that causes a required safety function to be lost.

(continued)