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

10 CFR 50.90

**SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT TO LICENSES NPF-14
AND NPF-22: APPLICATION TO ADOPT
TSTF-439, "ELIMINATE SECOND COMPLETION
TIMES LIMITING TIME FROM DISCOVERY OF
FAILURE TO MEET AN LCO"
PLA-7772**

**Docket No. 50-387
and 50-388**

Pursuant to 10 CFR 50.90, Susquehanna Nuclear, LLC (Susquehanna), is submitting a request for an amendment to the Technical Specifications (TS) for the Susquehanna Steam Electric Station (SSES), Units 1 and 2, Facility Operating License numbers NPF-14 and NPF-22. The proposed change eliminates second Completion Times limiting time from discovery of failure to meet a Limiting Condition for Operation (LCO). The proposed amendment is consistent with previously NRC-approved TS Task Force (TSTF) Traveler TSTF-439, Revision 2, "Eliminate Second Completion Times Limiting Time from Discovery of Failure to Meet an LCO."

Enclosure 1 provides a description and assessment of the proposed changes along with Susquehanna's determination that the proposed changes do not involve a significant hazard consideration. Enclosure 2 provides the existing TS pages marked to show the proposed changes. Enclosure 3 provides revised (clean) TS pages. Enclosure 4 provides existing TS Bases pages marked to show the proposed changes and are provided for information only.

Susquehanna requests NRC approval of the proposed changes and issuance of the requested license amendment by April 30, 2020. Once approved, the amendment shall be implemented within 90 days.


In accordance with 10 CFR 50.91, Susquehanna is providing a copy of this application, with enclosures, to the designated Commonwealth of Pennsylvania state official.

Both the Plant Operations Review Committee and the Nuclear Safety Review Board have reviewed the proposed changes.

Should you have any questions regarding this submittal, please contact Ms. Melisa Krick, Manager – Nuclear Regulatory Affairs, at (570) 542-1818.

This letter contains no new or revised regulatory commitments.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 3/28/2019


K. Cimorelli

Enclosures:

1. Description and Assessment
2. Marked-Up Technical Specification Pages
3. Revised (Clean) Technical Specification Pages
4. Marked-Up Technical Specification Bases Pages (For Information Only)

Copy: NRC Region I
Ms. L. H. Micewski, NRC Sr. Resident Inspector
Ms. T. E. Hood, NRC Project Manager
Ms. J. C. Tobin, NRC Project Manager
Mr. M. Shields, PA DEP/BRP

Enclosure 1 to PLA-7772

Description and Assessment

1. SUMMARY DESCRIPTION
2. DETAILED DESCRIPTION
 - 2.1 Description of the Proposed Change
 - 2.2 Variations
3. TECHNICAL EVALUATION
4. REGULATORY EVALUATION
 - 4.1 Applicable Regulatory Requirements/Criteria
 - 4.2 Precedent
 - 4.3 No Significant Hazards Consideration Analysis
 - 4.4 Conclusions
5. ENVIRONMENTAL CONSIDERATION
6. REFERENCES

SUSQUEHANNA ASSESSMENT

1. Summary Description

Pursuant to 10 CFR 50.90, Susquehanna Nuclear, LLC (Susquehanna), is submitting a request for an amendment to the Technical Specifications (TS) for the Susquehanna Steam Electric Station (SSES), Units 1 and 2, Facility Operating License numbers NPF-14 and NPF-22. The proposed change eliminates second Completion Times limiting time from discovery of failure to meet a Limiting Condition for Operation (LCO). The proposed amendment is consistent with previously NRC-approved TS Task Force (TSTF) Traveler TSTF-439, Revision 2, "Eliminate Second Completion Times Limiting Time from Discovery of Failure to Meet an LCO." (Reference 1)

2. Detailed Description

2.1 Description of the Proposed Change

The guidance of NUREG-1433, Revision 1, "Standard Technical Specifications General Electric Plants, BWR/4" (Reference 2), was used to convert the SSES custom TS to the improved TS (ITS), which was issued as amendments 178 and 151 for SSES Unit 1 and 2, respectively (Reference 3). The ITS conversion introduced into the SSES TS a second Completion Time for certain Required Actions that establish a limit on the maximum time allowed for any combination of Conditions that result in a single continuous failure to meet the LCO. These Completion Times, henceforth known 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 of time 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.

TSTF-439 deletes the second Completion Times from the impacted Required Actions. It also revises Example 1.3-3 to remove the second Completion Times and to revise the discussion in that 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 basis of the Completion Times and is inappropriate. Specifically, the proposed change deletes the second Completion Times associated with the following SSES TS Require Actions:

- TS 3.8.1, "AC Sources – Operating," Required Actions A.3 and B.4
- TS 3.8.7, "Distribution Systems – Operating," Required Actions A.1 and B.1

The TS Bases associated with these Required Actions are also being revised to delete the corresponding discussion of the second Completion Times. The TS and TS Bases markups are provided in Enclosures 2 and 4, respectively.

2.2 Variations

Susquehanna is proposing the following variations from the TS changes described in TSTF-439. These variations do not affect the applicability of TSTF-439 or the NRC staff's model safety evaluation to the proposed license amendment.

Table 1 – SSES Variations from TSTF-439

TSTF-439	SSES Variation	Comments
TS 3.1.7, "Standby Liquid Control System," Required Actions A.1 and B.1 second Completion Time eliminated.	No change made.	The Completion Times for the equivalent SSES TS do not include a second Completion Time.
TS 3.8.9, "Distribution Systems – Operating"	TS 3.8.7, "Distribution Systems – Operating"	Numbering difference only.
TS 3.8.9, Required Action B.1 second Completion Time eliminated.	No change made.	Condition B in the standard TS is for one or more AC vital buses inoperable. The SSES TS do not contain a commensurate Condition.
TS 3.8.9, Required Action C.1 second Completion Time eliminated.	TS 3.8.7, Required Action B.1 second Completion Time eliminated.	Numbering difference only.

3. 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, the NRC could not identify any regulatory requirement or program that could prevent this misuse of the TS. With the promulgation of the Maintenance Rule, implementation of the Reactor Oversight Process (ROP), and the inclusion of administrative controls as discussed herein, there would exist strong disincentive to continued operation with concurrent multiple inoperabilities rendering secondary Completion Times unnecessary.

Maintenance Rule

10 CFR 50.65(a)(1), “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants” (the Maintenance Rule), requires each licensee to monitor the performance or condition of structures, systems, and components (SSCs) against licensee-established goals to ensure that the SSCs are capable of fulfilling their intended functions. If the performance or condition of the 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 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 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 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 preventive or corrective maintenance. Risk assessments at SSES are conducted using the procedures and guidance endorsed by Regulatory Guide (RG) 1.160, “Monitoring the Effectiveness of Maintenance at Nuclear Power Plants.” RG 1.160 endorses the guidance in Section 11 of NUMARC 93-01, “Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants.” 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,
- increase 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

- determine that the proposed maintenance is acceptable.

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

Reactor Oversight Process

NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," describes the tracking and reporting of performance indicators to support the NRC's ROP. The NRC noted endorsement of NEI 99-02 in Regulatory Issue Summary 2001-11, "Voluntary Submission of Performance Indicator Data." NEI 99-02, Section 2.2, describes the Mitigating Systems Cornerstone. NEI 99-02 specifically addresses the emergency AC Sources, which encompasses the AC Sources and Distribution Systems LCOs. Extended unavailability 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 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, provides an equivalent level of plant safety without the unnecessary complication of the TS by second Completion Times on some Specifications.

4. Regulatory Evaluation

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), Section 50.36, "Technical Specifications," establish the requirements related to the content of the TS. 10 CFR 50.36(c)(2) states, in part:

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 Regulation 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 SSCs will be maintained so that they will perform their intended function when required.

The proposed change continues to meet the requirements of these regulations.

4.2 Precedent

The NRC has approved multiple amendment requests for other licensees to adopt TSTF-439. The most recent such amendment was issued to the Nine Mile Point Nuclear Station, Unit 2, on November 22, 2016 (Reference 4). There are no differences between SSES and Nine Mile Point that would affect the applicability of the proposed change.

4.3 No Significant Hazards Considerations Analysis

In accordance with the requirements of 10 CFR 50.90, Susquehanna Nuclear LLC (Susquehanna), requests an amendment to the Technical Specifications (TS) for the Susquehanna Steam Electric Station (SSES), Units 1 and 2. The proposed change eliminates second Completion Times limiting time from discovery of failure to meet a limiting condition for operation (LCO). These changes are consistent with NRC-approved TS Task Force (TSTF) Traveler TSTF-439, Revision 2, “Eliminate Second Completion Times Limiting Time from Discovering of Failure to Meet an LCO.”

Susquehanna has evaluated the proposed amendment against the standards in 10 CFR 50.92 and has determined that the operation of the SSES in accordance with the proposed amendment presents no significant hazards. Susquehanna’s evaluation against each of the criteria in 10 CFR 50.92 follows.

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 TS. Completion Times are not an initiator to any accident previously evaluated. As a result, the probability of an accident previously evaluated is not affected. 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 consequences of an accident previously evaluated are not affected by this change. The proposed change does not alter or prevent the

ability of structures, systems, or components 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 significant 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 of 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 does not alter any assumptions made in the safety analysis.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any 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 Times does not alter the manner in which safety limits, limiting safety system settings, or LCOs 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 evaluation, Susquehanna concludes that the proposed amendment does not involve a 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.

4.4 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 Commission's 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. Environmental Consideration

Susquehanna has determined that the proposed amendment would change 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 amendment 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 amendment 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 amendment.

6. References

1. TSTF letter to 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)
2. NUREG-1433, Revision 1 "Standard Technical Specifications – General Electric Plants, BWR/4," dated April 1995
3. NRC letter to Susquehanna, "Susquehanna Steam Electric Station, Units 1 and 2 (TAC Nos. M96327 and M96328)," dated July 30, 1998 (ADAMS Accession No. ML010160119)
4. NRC letter to Exelon Nuclear, "Nine Mile Point Nuclear Station, Unit 2 – Issuance of Amendment Re: Adoption of Technical Specification Task Force (TSTF) 439 (CAC No. MF7449)," dated November 22, 2016 (ADAMS Accession No. ML16281A596)

Enclosure 2 of PLA-7772

Marked-Up Technical Specification Pages

Revised Technical Specifications Pages

Unit 1 TS Pages

1.3-2, 1.3-6, 1.3-7, 3.8-2, 3.8-3, and 3.8-37

Unit 2 TS Pages

1.3-2, 1.3-6, 1.3-7, 3.8-2, 3.8-3, 3.8-44, 3.8-45, and 3.8-46

1.3 Completion Times

DESCRIPTION (continued)

However, when a subsequent division, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability; and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

The total Completion Time allowed for completing a Required Action to address the subsequent inoperability shall be limited to the more restrictive of either:

- a. The stated Completion Time, as measured from the initial entry into the Condition, plus an additional 24 hours; or
- b. The stated Completion Time as measured from discovery of the subsequent inoperability.

The above Completion Time extensions do 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.~~

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.	72 hours 72 hours

1.3 Completion Times

EXAMPLES
(continued)

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.

~~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.~~

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.3 Restore offsite circuit to OPERABLE status.	72 hours AND 6 days from discovery of failure to meet LCO
B. One required DG inoperable.	B.1 Perform SR 3.8.1.1 for OPERABLE offsite circuits. AND B.2 Declare required feature(s), supported by the inoperable DG, inoperable when the redundant required feature(s) are inoperable. AND	1 hour AND Once per 8 hours thereafter 4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s) (continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. (continued)</p>	<p>B.3.1 Determine OPERABLE DGs are not inoperable due to common cause failure.</p> <p><u>OR</u></p> <p>B.3.2 Perform SR 3.8.1.7 for OPERABLE DGs.</p> <p><u>AND</u></p> <p>B.4 Restore required DG to OPERABLE status.</p>	<p>24 hours</p> <p>24 hours</p> <p><u>OR</u></p> <p>24 hours prior to entering Condition B</p> <p>72 hours</p> <p><u>AND</u></p> <p>6 days from discovery of failure to meet LCO</p>
<p>C. Two offsite circuits inoperable.</p>	<p>C.1 Restore one offsite circuit to OPERABLE status.</p>	<p>24 hours</p>
<p>D. One offsite circuit inoperable.</p> <p><u>AND</u></p> <p>One required DG inoperable.</p>	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems – Operating," when Condition D is entered with no AC power source to any 4.16 kV ESS bus. -----</p> <p>D.1 Restore offsite circuit to OPERABLE status.</p> <p><u>OR</u></p> <p>D.2 Restore required DG to OPERABLE status</p>	<p>12 hours</p> <p>12 hours</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems – Operating

LCO 3.8.7 The electrical power distribution subsystems in Table 3.8.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Not applicable to DG E DC electrical power subsystem. ----- One or more Unit 1 AC electrical power distribution subsystems inoperable.</p>	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.4, “DC Sources – Operating,” for DC source(s) made inoperable by inoperable power distribution subsystem(s). ----- A.1 Restore Unit 1 AC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>8 hours <u>AND</u> 16 hours from discovery of failure to meet LCO 3.8.7 except for Condition D or E</p>
<p>B. -----NOTE----- Not applicable to DG E DC electrical power subsystem. ----- One or more Unit 1 DC electrical power distribution subsystems inoperable.</p>	<p>B.1 Restore Unit 1 DC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>2 hours <u>AND</u> 16 hours from discovery of failure to meet LCO 3.8.7 except for Condition D or E</p>

1.3 Completion Times

DESCRIPTION (continued) However, when a subsequent division, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability; and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

The total Completion Time allowed for completing a Required Action to address the subsequent inoperability shall be limited to the more restrictive of either:

- a. The stated Completion Time, as measured from the initial entry into the Condition, plus an additional 24 hours; or
- b. The stated Completion Time as measured from discovery of the subsequent inoperability.

The above Completion Time extensions do 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.~~

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.	72 hours 72 hours

1.3 Completion Times

EXAMPLES
(continued)

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.

~~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.~~

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p><u>AND</u></p> <p>A.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p> <p>A.3 Restore offsite circuit to OPERABLE status.</p>	<p>24 hours from discovery of no offsite power to one 4.16 kV ESS bus concurrent with inoperability of redundant required feature(s)</p> <p>72 hours</p> <p><u>AND</u></p> <p>6 days from discovery of failure to meet LCO</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One required DG inoperable.</p>	<p>B.1 Perform SR 3.8.1.1 for OPERABLE offsite circuits.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p>
	<p><u>AND</u></p> <p>B.2 Declare required feature(s), supported by the inoperable DG, inoperable when the redundant required feature(s) are inoperable.</p>	<p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p>
	<p><u>AND</u></p> <p>B.3.1 Determine OPERABLE DGs are not inoperable due to common cause failure.</p> <p><u>OR</u></p>	<p>24 hours</p>
	<p>B.3.2 Perform SR 3.8.1.7 for OPERABLE DGs.</p>	<p>24 hours</p> <p><u>OR</u></p> <p>24 hours prior to entering Condition B</p>
	<p><u>AND</u></p> <p>B.4 Restore required DG to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>6 days from discovery of failure to meet LCO</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems – Operating

LCO 3.8.7 The electrical power distribution subsystems in Table 3.8.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Not applicable to DG E DC Bus 0D597 -----</p> <p>One or more Unit 2 AC electrical power distribution subsystems inoperable.</p>	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.4, “DC Sources – Operating,” for DC source(s) made inoperable by inoperable power distribution subsystem(s). -----</p> <p>A.1 Restore Unit 2 AC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>8 hours</p> <p>AND</p> <p>16 hours from discovery of failure to meet LCO 3.8.7 except for Condition F or G</p>
<p>B. -----NOTE----- Not applicable to DG E DC Bus 0D597 -----</p> <p>One or more Unit 2 DC electrical power distribution subsystems inoperable.</p>	<p>B.1 Restore Unit 2 DC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>2 hours</p> <p>AND</p> <p>16 hours from discovery of failure to meet LCO 3.8.7 except for Condition F or G</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One Unit 1 AC electrical power distribution subsystem inoperable.	C.1 Restore Unit 1 AC electrical power distribution subsystem to OPERABLE status.	72 hours <u>OR</u> 7 days during the replacement of 480 V ESS Load Center Transformers in Unit 1 ⁽¹⁾
D. Two Unit 1 AC electrical power distribution subsystems on one Division inoperable for performance of Unit 1 SR 3.8.1.19.	D.1 Restore at least one Unit 1 AC electrical power distribution subsystems to OPERABLE status.	8 hours
E. Required Action and Associated Completion Time of Condition A, B or C not met.	E.1 Be in MODE 3. <u>AND</u> E.2 Be in MODE 4.	12 hours 36 hours
F. Diesel Generator E DC electrical power subsystem inoperable, while not aligned to the Class 1E distribution system.	F.1 Verify that all ESW valves associated with Diesel Generator E are closed.	2 hours
G. Diesel Generator E DC electrical power subsystem inoperable, while aligned to the Class 1E distribution system.	G.1 Declare Diesel Generator E inoperable.	2 hours

⁽¹⁾ This temporary 7-day completion time is applicable during the replacement of all Unit 1 480 V ESS Load Center Transformers, while Unit 1 is in MODES 4 or 5, and will expire on June 15, 2020.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>H. Two or more electrical power distribution subsystems inoperable that result in a loss of safety function.</p>	<p>H.1 Enter LCO 3.0.3.</p>	<p>Immediately</p>
<p>I. -----NOTE----- Not applicable to DG E DC Bus 0D597 ----- One or more Unit 1 DC electrical power distribution subsystem(s) inoperable.</p>	<p>I.1 Transfer associated Unit 1 and common loads to corresponding Unit 2 DC electrical power distribution subsystem.</p> <p><u>AND</u></p> <p>I.2 Restore Unit 1 and common loads to corresponding Unit 1 DC electrical power distribution subsystem.</p>	<p>2 hours</p> <p>72 hours after Unit 1 DC electrical power subsystem is restored to OPERABLE status</p>
<p>J. Required Actions and Associated Completion Times of Condition I not met.</p>	<p>J.1 Declare associated common loads inoperable.</p>	<p>Immediately</p>

Enclosure 3 of PLA-7772

Revised (Clean) Technical Specification Pages

Revised Technical Specifications Pages

Unit 1 TS Pages

1.3-2, 1.3-6, 1.3-7, 3.8-2, 3.8-3, and 3.8-37

Unit 2 TS Pages

1.3-2, 1.3-6, 1.3-7, 3.8-2, 3.8-3, 3.8-44, 3.8-45, and 3.8-46

1.3 Completion Times

DESCRIPTION (continued)

However, when a subsequent division, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability; and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

The total Completion Time allowed for completing a Required Action to address the subsequent inoperability shall be limited to the more restrictive of either:

- a. The stated Completion Time, as measured from the initial entry into the Condition, plus an additional 24 hours; or
- b. The stated Completion Time as measured from discovery of the subsequent inoperability.

The above Completion Time extensions do 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 . . ."

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.	C.1 Restore Function X subsystem to OPERABLE status.	72 hours
<u>AND</u>	<u>OR</u>	
One Function Y subsystem inoperable.	C.2 Restore Function Y subsystem to OPERABLE status.	72 hours

1.3 Completion Times

EXAMPLES
(continued)

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.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.3 Restore offsite circuit to OPERABLE status.	72 hours
B. One required DG inoperable.	<p>B.1 Perform SR 3.8.1.1 for OPERABLE offsite circuits.</p> <p><u>AND</u></p> <p>B.2 Declare required feature(s), supported by the inoperable DG, inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p> <p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. (continued)</p>	<p>B.3.1 Determine OPERABLE DGs are not inoperable due to common cause failure.</p> <p><u>OR</u></p> <p>B.3.2 Perform SR 3.8.1.7 for OPERABLE DGs.</p> <p><u>OR</u></p> <p>24 hours prior to entering Condition B</p> <p><u>AND</u></p> <p>B.4 Restore required DG to OPERABLE status.</p>	<p>24 hours</p> <p>24 hours</p> <p>72 hours</p>
<p>C. Two offsite circuits inoperable.</p>	<p>C.1 Restore one offsite circuit to OPERABLE status.</p>	<p>24 hours</p>
<p>D. One offsite circuit inoperable.</p> <p><u>AND</u></p> <p>One required DG inoperable.</p>	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems – Operating," when Condition D is entered with no AC power source to any 4.16 kV ESS bus. -----</p> <p>D.1 Restore offsite circuit to OPERABLE status.</p> <p><u>OR</u></p> <p>D.2 Restore required DG to OPERABLE status</p>	<p>12 hours</p> <p>12 hours</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems – Operating

LCO 3.8.7 The electrical power distribution subsystems in Table 3.8.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Not applicable to DG E DC electrical power subsystem. ----- One or more Unit 1 AC electrical power distribution subsystems inoperable.</p>	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.4, “DC Sources – Operating,” for DC source(s) made inoperable by inoperable power distribution subsystem(s). ----- A.1 Restore Unit 1 AC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>8 hours</p>
<p>B. -----NOTE----- Not applicable to DG E DC electrical power subsystem. ----- One or more Unit 1 DC electrical power distribution subsystems inoperable.</p>	<p>B.1 Restore Unit 1 DC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>2 hours</p>

1.3 Completion Times

DESCRIPTION (continued)

However, when a subsequent division, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability; and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

The total Completion Time allowed for completing a Required Action to address the subsequent inoperability shall be limited to the more restrictive of either:

- a. The stated Completion Time, as measured from the initial entry into the Condition, plus an additional 24 hours; or
- b. The stated Completion Time as measured from discovery of the subsequent inoperability.

The above Completion Time extensions do 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 . . ."

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.	C.1 Restore Function X subsystem to OPERABLE status.	72 hours
<u>AND</u>	<u>OR</u>	
One Function Y subsystem inoperable.	C.2 Restore Function Y subsystem to OPERABLE status.	72 hours

1.3 Completion Times

EXAMPLES
(continued)

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.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p><u>AND</u></p> <p>A.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable.</p>	24 hours from discovery of no offsite power to one 4.16 kV ESS bus concurrent with inoperability of redundant required feature(s)
	<p><u>AND</u></p> <p>A.3 Restore offsite circuit to OPERABLE status.</p>	72 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One required DG inoperable.</p>	<p>B.1 Perform SR 3.8.1.1 for OPERABLE offsite circuits.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p>
	<p><u>AND</u></p> <p>B.2 Declare required feature(s), supported by the inoperable DG, inoperable when the redundant required feature(s) are inoperable.</p>	<p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p>
	<p><u>AND</u></p> <p>B.3.1 Determine OPERABLE DGs are not inoperable due to common cause failure.</p> <p><u>OR</u></p>	<p>24 hours</p>
	<p>B.3.2 Perform SR 3.8.1.7 for OPERABLE DGs.</p>	<p>24 hours</p> <p><u>OR</u></p> <p>24 hours prior to entering Condition B</p>
	<p><u>AND</u></p> <p>B.4 Restore required DG to OPERABLE status.</p>	<p>72 hours</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems – Operating

LCO 3.8.7 The electrical power distribution subsystems in Table 3.8.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Not applicable to DG E DC Bus 0D597 -----</p> <p>One or more Unit 2 AC electrical power distribution subsystems inoperable.</p>	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.4, “DC Sources – Operating,” for DC source(s) made inoperable by inoperable power distribution subsystem(s). -----</p> <p>A.1 Restore Unit 2 AC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>8 hours</p>
<p>B. -----NOTE----- Not applicable to DG E DC Bus 0D597 -----</p> <p>One or more Unit 2 DC electrical power distribution subsystems inoperable.</p>	<p>B.1 Restore Unit 2 DC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>2 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One Unit 1 AC electrical power distribution subsystem inoperable.	C.1 Restore Unit 1 AC electrical power distribution subsystem to OPERABLE status.	72 hours <u>OR</u> 7 days during the replacement of 480 V ESS Load Center Transformers in Unit 1 ⁽¹⁾
D. Two Unit 1 AC electrical power distribution subsystems on one Division inoperable for performance of Unit 1 SR 3.8.1.19.	D.1 Restore at least one Unit 1 AC electrical power distribution subsystems to OPERABLE status.	8 hours
E. Required Action and Associated Completion Time of Condition A, B or C not met.	E.1 Be in MODE 3. <u>AND</u> E.2 Be in MODE 4.	12 hours 36 hours
F. Diesel Generator E DC electrical power subsystem inoperable, while not aligned to the Class 1E distribution system.	F.1 Verify that all ESW valves associated with Diesel Generator E are closed.	2 hours
G. Diesel Generator E DC electrical power subsystem inoperable, while aligned to the Class 1E distribution system.	G.1 Declare Diesel Generator E inoperable.	2 hours

⁽¹⁾ This temporary 7-day completion time is applicable during the replacement of all Unit 1 480 V ESS Load Center Transformers, while Unit 1 is in MODES 4 or 5, and will expire on June 15, 2020.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>H. Two or more electrical power distribution subsystems inoperable that result in a loss of safety function.</p>	<p>H.1 Enter LCO 3.0.3.</p>	<p>Immediately</p>
<p>I. -----NOTE----- Not applicable to DG E DC Bus 0D597 ----- One or more Unit 1 DC electrical power distribution subsystem(s) inoperable.</p>	<p>I.1 Transfer associated Unit 1 and common loads to corresponding Unit 2 DC electrical power distribution subsystem.</p> <p><u>AND</u></p> <p>I.2 Restore Unit 1 and common loads to corresponding Unit 1 DC electrical power distribution subsystem.</p>	<p>2 hours</p> <p>72 hours after Unit 1 DC electrical power subsystem is restored to OPERABLE status</p>
<p>J. Required Actions and Associated Completion Times of Condition I not met.</p>	<p>J.1 Declare associated common loads inoperable.</p>	<p>Immediately</p>

Enclosure 4 of PLA-7772

Marked-Up Technical Specification Bases Pages

Revised Technical Specifications Bases Pages

Unit 1 TS Bases Pages

3.8-9, 3.8-10, 3.8-12, 3.8-81, and 3.8-83

Unit 2 TS Bases Pages

3.8-10, 3.8-11, 3.8-13, 3.8-87, and 3.8-89

(Provided for Information Only)

BASES

ACTIONS (continued)

A.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.

A.3

According to Regulatory Guide 1.93 (Ref. 7), operation may continue in Condition A 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 circuit 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, reasonable time for repairs, and the low probability of a DBA occurring during this period.

~~The second Completion Time for Required Action A.2 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 the LCO. If Condition A 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 72 hours. This situation could lead to a total of 144 hours, 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 72 hours (for a total of 9 days) allowed prior to complete restoration of the LCO. The 6 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 A and B are entered concurrently. The "AND" connector between the 72 hours and 6 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.~~

BASES

ACTIONS (continued)

A.3 (continued)

~~As in Required Action A.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 the LCO was initially not met, instead of at the time that Condition A was entered.~~

B.1

To ensure a highly reliable power source remains with one required DG inoperable, it is necessary to verify the availability of the required 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 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.

B.2

Required Action B.2 is intended to provide assurance that a loss of offsite power, during the period that a DG is inoperable, does not result in a complete loss of safety function of critical systems. These features are designed with redundant safety related divisions (i.e., single division systems are not included). Redundant required features failures consist of inoperable features associated with a division redundant to the division that has an inoperable DG.

The Completion Time is intended to allow the operator time to evaluate and repair any discovered inoperabilities. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." In this Required Action the Completion Time only begins on discovery that both:

- a. An inoperable DG exists; and
- b. A required feature powered from another diesel generator (Division 1 or 2) is inoperable.

If, at any time during the existence of this Condition (one required DG inoperable), a required feature subsequently becomes inoperable, this Completion Time begins to be tracked.

BASES

ACTIONS (continued)

B.3.1 and B.3.2 (continued)

According to Generic Letter 84-15 (Ref. 8), 24 hours is a reasonable time to confirm that the OPERABLE DGs are not affected by the same problem as the inoperable DG.

B.4

According to Regulatory Guide 1.93 (Ref. 7), operation may continue in Condition B for a period that should not exceed 72 hours. In Condition B, the remaining OPERABLE DGs and offsite circuits 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, reasonable time for repairs, and low probability of a DBA occurring during this period.

~~The second Completion Time for Required Action B.4 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 the LCO. If Condition B is entered while, for 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 144 hours, since initial failure of the LCO, to restore the DG. At this time, an offsite circuit could again become inoperable, the DG restored OPERABLE, and an additional 72 hours (for a total of 9 days) allowed prior to complete restoration of the LCO. The 6 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 A and B are entered concurrently. The "AND" connector between the 72 hour and 6 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive must be met.~~

~~As in Required Action B.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 that the LCO was initially not met, instead of the time that Condition B was entered.~~

BASES

ACTIONS
(continued)

A.1 (continued)

before requiring a unit shutdown in this Condition is acceptable because:

- a. There is a potential for decreased safety if the attention of unit operators 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 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 A.1 establishes a limit on the maximum time allowed for any combination of required distribution subsystems to be inoperable during any single continuous occurrence of failing to meet LCO 3.8.7. If Condition A is entered while, for instance, a DC bus is inoperable and subsequently returned OPERABLE, this LCO may already have been not met for up to 2 hours. This situation could lead to a total duration of 10 hours, since initial failure of the LCO, to restore the AC distribution system. At this time a DC circuit could again become inoperable, and AC distribution 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 16 hour Completion Time is an acceptable limitation on this potential to fail to meet the LCO indefinitely. The completion time exception is not applicable to Condition D or E because Conditions D and E are only applicable to DG E DC electrical power subsystem.~~

Condition A is modified by a Note that states that Condition A is not applicable to the DG E DC electrical power subsystem. Condition D or E is applicable to an inoperable DG E DC electrical power subsystem.

Required Action A.1 is modified by a Note that requires the applicable Conditions and Required Actions of LCO 3.8.4 "DC Sources - Operating," to be entered for DC subsystems made inoperable by inoperable AC electrical power distribution subsystems. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for inoperable DC sources. Inoperability of a distribution subsystem can result in loss of charging power to batteries and eventual loss of DC power. This Note ensures that the appropriate attention is given to restoring charging power to batteries, if necessary, after loss of distribution systems.

BASES

ACTIONS
(continued)

B.1 (continued)

The 2 hour Completion Time for DC buses is consistent with Regulatory Guide 1.93 (Ref. 3).

~~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 continuous 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 10 hours, since initial failure of the LCO, to restore the DC distribution system. At this time, an AC division could again become inoperable, and DC distribution could be restored OPERABLE. This could continue indefinitely.~~

Condition B is modified by a Note that states that Condition B is not applicable to the DG E DC electrical power subsystem. Condition D or E is applicable to an inoperable DG E DC electrical power subsystem.

~~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 16 hour Completion Time is an acceptable limitation on this potential of failing to meet the LCO indefinitely. The Completion Time exception is not applicable to Condition D or E because Condition D and E are only applicable to DG E DC electrical power subsystem.~~

C.1 and C.2

If the inoperable distribution subsystem cannot be restored to OPERABLE status within the associated Completion Time, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

A.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.

A.3

According to Regulatory Guide 1.93 (Ref. 7), operation may continue in Condition A 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 circuit 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, reasonable time for repairs, and the low probability of a DBA occurring during this period.

~~The second Completion Time for Required Action A.2 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 the LCO. If Condition A 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 72 hours. This situation could lead to a total of 144 hours, 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 72 hours (for a total of 9 days) allowed prior to complete restoration of the LCO. The 6 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 A and B are entered concurrently. The "AND" connector between the 72 hours and 6 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.~~

BASES

ACTIONS (continued)

A.3 (continued)

~~As in Required Action A.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 the LCO was initially not met, instead of at the time that Condition A was entered.~~

B.1

To ensure a highly reliable power source remains with one required DG inoperable, it is necessary to verify the availability of the required 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 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.

B.2

Required Action B.2 is intended to provide assurance that a loss of offsite power, during the period that a DG is inoperable, does not result in a complete loss of safety function of critical systems. These features are designed with redundant safety related divisions (i.e., single division systems are not included). Redundant required features failures consist of inoperable features associated with a division redundant to the division that has an inoperable DG.

The Completion Time is intended to allow the operator time to evaluate and repair any discovered inoperabilities. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." In this Required Action the Completion Time only begins on discovery that both:

- a. An inoperable DG exists; and
- b. A required feature powered from another diesel generator (Division 1 or 2) is inoperable.

If, at any time during the existence of this Condition (one required DG inoperable), a required feature subsequently becomes inoperable, this Completion Time begins to be tracked.

BASES

ACTIONS (continued)

B.3.1 and B.3.2 (continued)

According to Generic Letter 84-15 (Ref. 8), 24 hours is a reasonable time to confirm that the OPERABLE DGs are not affected by the same problem as the inoperable DG.

B.4

According to Regulatory Guide 1.93 (Ref. 7), operation may continue in Condition B for a period that should not exceed 72 hours. In Condition B, the remaining OPERABLE DGs and offsite circuits 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, reasonable time for repairs, and low probability of a DBA occurring during this period.

~~The second Completion Time for Required Action B.4 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 the LCO. If Condition B is entered while, for 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 144 hours, since initial failure of the LCO, to restore the DG. At this time, an offsite circuit could again become inoperable, the DG restored OPERABLE, and an additional 72 hours (for a total of 9 days) allowed prior to complete restoration of the LCO. The 6-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 A and B are entered concurrently. The "AND" connector between the 72-hour and 6-day Completion Times means that both Completion Times apply simultaneously, and the more restrictive must be met.~~

~~As in Required Action B.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 that the LCO was initially not met, instead of the time that Condition B was entered.~~

BASES

ACTIONS
(continued)

A.1 (continued)

requiring a unit shutdown in this Condition is acceptable because:

- a. There is a potential for decreased safety if the attention of unit operators 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 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 A.1 establishes a limit on the maximum time allowed for any combination of required distribution subsystems to be inoperable during any single continuous occurrence of failing to meet LCO 3.8.7. If Condition A is entered while, for instance, a DG bus is inoperable and subsequently returned OPERABLE, this LCO may already have been not met for up to 2 hours. This situation could lead to a total duration of 10 hours, since initial failure of the LCO, to restore the AC distribution system. At this time, a DC circuit could again become inoperable, and AC distribution 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 16 hour Completion Time is an acceptable limitation on this potential to fail to meet the LCO indefinitely. The completion time exception is not applicable to Condition F or G because Condition F and G are only applicable to DG E DC electrical power subsystem.~~

Condition A is modified by a Note that states that Condition A is not applicable to the DG E DC electrical power subsystem. Condition F or G is applicable to an inoperable DG E DC electrical power subsystem.

Required Action A.1 is modified by a Note that requires the applicable Conditions and Required Actions of LCO 3.8.4 "DC Sources - Operating," to be entered for DC subsystems made inoperable by inoperable AC electrical power distribution subsystems. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for inoperable DC sources. Inoperability of a distribution subsystem can result in loss of charging power to batteries and eventual loss of DC power. This Note ensures that the appropriate attention is given to restoring charging power to batteries, if necessary, after loss of distribution systems.

BASES

ACTIONS (continued)

B.1 (continued)

The 2 hour Completion Time for DC buses is consistent with Regulatory Guide 1.93 (Ref. 3).

~~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 continuous 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 10 hours, since initial failure of the LCO, to restore the DC distribution system. At this time, an AC division could again become inoperable, and DC distribution could be restored OPERABLE. This could continue indefinitely.~~

Condition B is modified by a Note that states that Condition B is not applicable to the DG E DC electrical power subsystem. Condition F or G is applicable to an inoperable DG E DC electrical power subsystem.

~~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 16 hour Completion Time is an acceptable limitation on this potential of failing to meet the LCO indefinitely. The Completion Time exception is not applicable to Condition E and F because Condition E and F are only applicable to DG E DC electrical power subsystem.~~

C.1

With one Unit 1 AC electrical power distribution subsystem that support Unit 2 inoperable, the remaining Unit 1 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. However, the overall reliability is reduced because a single failure in the remaining AC electrical power distribution subsystem could result in the minimum required ESF functions not being supported. The Completion