

10 CFR 50.90

NMP2L2612

February 23, 2016

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

Nine Mile Point Nuclear Station, Unit 2  
Renewed Facility Operating License No. NPF-69  
NRC Docket No. 50-410

Subject: License Amendment Request – Incorporate Previously NRC-Approved  
TSTF-439 Technical Specifications Changes

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon) requests an amendment to the Technical Specifications, Appendix A, of Renewed Facility Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit 2 (NMP2). The proposed amendment is consistent with previously NRC-approved Industry/Technical Specification Task Force 439 (TSTF-439), Revision 2, "Eliminate Second Completion Times Limiting Time From Discovery of Failure To Meet an LCO." TSTF-439 has been incorporated into NUREG 1433, Standard Technical Specifications, General Electric BWR/4 Plants, Revision 4, Volume 1.

Attachment 1 provides the Evaluation of Proposed Technical Specification Changes.  
Attachment 2 provides the Proposed Technical Specification and Bases Marked-Up Pages.

The proposed changes have been reviewed by the NMP Plant Operations Review Committee and approved by the Nuclear Safety Review Board in accordance with the requirements of the Exelon Quality Assurance Program.

Exelon requests approval of the proposed amendment by February 28, 2017. Once approved, the amendment shall be implemented within 60 days.

There are no regulatory commitments contained in this request.

U.S. Nuclear Regulatory Commission  
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In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), Exelon is notifying the State of New York of this application of license amendment by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this submittal, please contact Ron Reynolds at (610) 765-5247.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 23<sup>rd</sup> day of February 2016.

Respectfully,



David T. Gudger  
David T. Gudger  
Manager, Licensing & Regulatory Affairs  
Exelon Generation Company, LLC

Attachments: 1) Evaluation of Proposed Changes  
2) Proposed Technical Specification and Bases Marked-Up Pages

cc: USNRC Regional Administrator, Region I	w/attachments
USNRC Project Manager, NMP	w/attachments
USNRC Senior Resident Inspector, NMP	w/attachments
A. L. Peterson, NYSERDA	w/attachments

# **ATTACHMENT 1**

## **EVALUATION OF PROPOSED CHANGES**

License Amendment Request

Nine Mile Point Nuclear Station, Unit 2

Docket No. 50-410

**SUBJECT:** Incorporate Previously NRC-Approved TSTF-439 Technical Specifications Changes

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## **Incorporate Previously NRC-Approved TSTF-439 Technical Specifications Changes**

### **1.0 SUMMARY DESCRIPTION**

This evaluation supports a request to amend Renewed Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit 2 (NMP2).

The proposed changes would revise the Operating License to incorporate previously NRC-approved Industry/Technical Specification Task Force 439 (TSTF-439), Revision 2, "Eliminate Second Completion Times Limiting Time From Discovery of Failure To Meet an LCO."

Exelon Generation Company, LLC (Exelon) requests approval of the proposed changes. Once approved, the amendment shall be implemented within 60 days.

### **2.0 DETAILED DESCRIPTION**

TSTF-439, Revision 2 (Reference 1), modifies Improved Technical Specification (NUREG-1433) Completion Times Example 1.3-3 to eliminate the second Completion Times and to replace the discussion regarding second Completion Times with a new discussion. TSTF-439, Revision 2, has been incorporated into NUREG 1433, Volume 1, Revision 4 (Reference 2), as identified in a letter from the U.S. Nuclear Regulatory Commission to the Technical Specifications Task Force (Reference 3). The second Completion Time associated with Technical Specification (TS) 3.8.1 Required Actions A.3 and B.4, and TS 3.8.8 Required Actions A.1, B.1, and C.1 are being deleted. The Bases associated with these Required Actions are also being revised to delete the discussion of the second Completion Time.

It is proposed to revise NMP2 Technical Specification Section 1.3, Example 1.3-3, to conform to the above changes. The affected TS Bases pages are revised in accordance with TSTF-439, Revision 2, and NUREG 1433, Revision 4, to conform to the changes in TS 1.3.

There are no intended deviations from the TSTF.

See the markup of TS and TS Bases pages for NMP2 included in Attachment 2. The TS Bases pages are included for information only.

### **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 a Limiting Condition for Operation (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 which could prevent this misuse of the TS. However, that is no longer the case. There are now two programs which would provide a strong disincentive to continued operation with concurrent multiple inoperabilities of the type the second Completion Times were designed to prevent; the Maintenance Rule and the Reactor Oversight Process.

The Maintenance Rule: 10 CFR 50.65(a)(1), 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 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). The NRC Resident Inspectors monitor the licensee's Corrective Action Program.

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 the preferred mechanism to apply this influence as the Maintenance Rule considers all inoperable risk-significant equipment, not limited to the one or two systems governed by the same LCO.

Under 10 CFR 50.65(a)(4), the risk impact of 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 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." Regulatory Guide 1.182 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, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (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.

The Reactor Oversight Process: 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). The NEI document is endorsed by RIS 2001-11, "Voluntary Submission Of Performance Indicator Data." 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). Extended unavailability due to multiple entries into the ACTIONS would affect the NRC's evaluation of the licensee's performance under the ROP.

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, provides an equivalent or superior level of plant safety without the unnecessary complication of the TS by second Completion Times on some Specifications.

## 4.0 REGULATORY EVALUATION

### 4.1 Applicable Regulatory Requirements/Criteria

10 CFR 50.36, "Technical specifications" - 10 CFR 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." The proposed change continues to meet the requirements of this regulation.

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

### 4.2 Precedent

TSTF-439, Revision 2, was approved for use as described in:

NUREG-1433, Standard Technical Specifications, General Electric BWR/4 Plants, Volume 1, Rev. 4, dated April 2012 (Reference 2).

Letter from Mr. John D. Hughey (U. S. Nuclear Regulatory Commission) to Mr. Charles G. Pardee (Exelon Generation Company, LLC), "Peach Bottom Atomic Power Station, Units 2 And 3 -Issuance of Amendments RE: Incorporation of Previously NRC-Approved TSTFs and Other Administrative Changes (TAC NOS. MD9434, MD9435, MD9447, MD9448, MD9449, MD9450, MD9451, MD9452, MD9454, MD9455, MD9456 AND MD9457)," dated August 31, 2009.

Letter from B. K. Singal (U. S. Nuclear Regulatory Commission) to M. R. Blevins (Luminant Generation Company LLC), "Comanche Peak Steam Electric Station Units 1 and 2 – Issuance of Amendments RE: Revision to Technical Specifications (TS) 3.7.5, 3.8.1, and 3.8.9, and TS Example 1.3-3 (TAC NOS. MD4070 AND MD4071)," dated January 25, 2008.

### 4.3 No Significant Hazards Consideration

Exelon has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No.

The proposed change eliminates certain Completion Times from the Technical Specifications. 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 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 amendment 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 amendment 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 limiting 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, Exelon 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.

## **5.0 ENVIRONMENTAL CONSIDERATION**

A review 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 effluent 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.

## **6.0 REFERENCES**

1. Letter from the Technical Specifications Task Force to the U.S. Nuclear Regulatory Commission, "TSTF-439, Revision 2, 'Eliminate Second Completion Times Limiting Time From Discovery of Failure To Meet an LCO,'" Rev 2, dated June 20, 2005.
2. NUREG-1433, Standard Technical Specifications, General Electric BWR/4 Plants, Volume 1, Rev. 4, dated April 2012.
3. Letter from Thomas H. Boyce, Technical Specifications Branch Chief ( U.S Nuclear Regulatory Commission) to the Technical Specifications Task Force, "Status Of TSTF 439, "Eliminate Second Completion Times Limiting Time From Discovery Of Failure To Meet An LCO," dated January 11, 2006.

**ATTACHMENT 2**

PROPOSED TECHNICAL SPECIFICATION and BASES MARKED-UP PAGES

License Amendment Request

Nine Mile Point Nuclear Station, Unit 2

Docket No. 50-410

TS Pages 1.3-2, 1.3-6 and -7; 3.8.1-2 and -3; and 3.8.8-1 and -2

Bases Pages B3.8.1-8, B3.8.1-13, and B3.8.8-5 through -9

1.3 Completion Times

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DESCRIPTION  
(continued)

- 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 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 Conditions A and B in Example 1.3-3 may not be extended.~~

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(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> 40 days from discovery of failure to meet the LGO
B. One Function Y subsystem inoperable.	B.1 Restore Function Y subsystem to OPERABLE status.	72 hours <u>AND</u> 40 days from discovery of failure to meet the LGO
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

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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.~~

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(continued)

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.

Insert

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. (continued)</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 required offsite circuit to OPERABLE status.</p>	<p>24 hours from discovery of no offsite power to one division concurrent with inoperability of redundant required feature(s)</p> <p>72 hours</p> <p><u>AND</u></p> <p>24 hours from discovery of both HPCS and Low Pressure Core Spray (LPCS) Systems with no offsite power</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p><u>AND</u></p> <p>17 days from discovery of failure to meet LGO</p> </div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">Delete</div>
<p>B. One required DG inoperable.</p>	<p>B.1 Perform SR 3.8.1.1 for OPERABLE required offsite circuit(s).</p> <p><u>AND</u></p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p> <p style="text-align: right;">(continued)</p>

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. (continued)</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>B.3.1 Determine OPERABLE DG(s) are not inoperable due to common cause failure.</p> <p><u>OR</u></p> <p>B.3.2 Perform SR 3.8.1.2 for OPERABLE DG(s).</p> <p><u>AND</u></p> <p>B.4 Restore required DG to OPERABLE status.</p>	<p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>24 hours</p> <p>24 hours</p> <p>72 hours from discovery of an inoperable Division 3 DG</p> <p><u>AND</u></p> <p>14 days</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p><u>AND</u></p> <p>17 days from discovery of failure to meet LGO</p> </div>

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3.8 ELECTRICAL POWER SYSTEMS

3.8.8 Distribution Systems – Operating

- LCO 3.8.8 The following AC and DC electrical power distribution subsystems shall be OPERABLE:
- a. Division 1 and Division 2 AC electrical power distribution subsystems;
  - b. Division 1 and Division 2 120 VAC uninterruptible electrical power distribution subsystems;
  - c. Division 1 and Division 2 DC electrical power distribution subsystems; and
  - d. Division 3 AC and DC electrical power distribution subsystems.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or both Division 1 and 2 AC electrical power distribution subsystems inoperable.	A.1 Restore Division 1 and 2 AC electrical power distribution subsystem(s) to OPERABLE status.	8 hours <div style="border: 1px solid black; padding: 5px; display: inline-block;">AND <del>16 hours from discovery of failure to meet LCO 3.8.8.a, b, or e</del></div>

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(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One or both Division 1 and 2 120 VAC uninterruptible electrical power distribution subsystems inoperable.</p>	<p>B.1 Restore Division 1 and 2 120 VAC uninterruptible electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>8 hours</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><del>AND</del></p> <p>16 hours from discovery of failure to meet LCO 3.8.8.a, b, or e</p> </div> <p style="text-align: right;">Delete</p>
<p>C. One or both Division 1 and 2 DC electrical power distribution subsystems inoperable.</p>	<p>C.1 Restore Division 1 and 2 DC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>2 hours</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><del>AND</del></p> <p>16 hours from discovery of failure to meet LCO 3.8.8.a, b, or e</p> </div> <p style="text-align: right;">Delete</p>
<p>D. Required Action and associated Completion Time of Condition A, B, or C not met.</p>	<p>D.1 Be in MODE 3.</p> <p><del>AND</del></p> <p>D.2 Be in MODE 4.</p>	<p>12 hours</p> <p>36 hours</p>
<p>E. One or both Division 3 AC and DC electrical power distribution subsystems inoperable.</p>	<p>E.1 Declare High Pressure Core Spray System inoperable.</p>	<p>Immediately</p>

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BASES

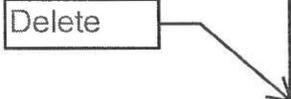
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ACTIONS

A.3 (continued)

The 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.

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~~The third Completion Time for Required Action A.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 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 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 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 17 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive must be met.~~

Similar to Required Action A.2, the Completion Time of Required Action A.3 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, it is necessary to verify the availability of the remaining required offsite circuit 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.

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BASES

ACTIONS

B.4 (continued)

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~~The third Completion Time for Required Action B.4 established 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 17 days, since initial failure to meet 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 20 days) allowed prior to complete restoration of the LCO. The 17 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 Completion Times means that the three Completion Times apply simultaneously, and the most restrictive Completion Time must be met.~~

Similar to Required Action B.2, the Completion Time of Required Action B.4 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 the time Condition B was entered.

C.1 and C.2

Required Action C.1 addresses actions to be taken in the event of concurrent failure of redundant required features. Required Action C.1 reduces the vulnerability to a loss of function. The Completion Time for taking these actions is reduced to 12 hours from that allowed with only one division without offsite power (Required Action A.2). The rationale for the reduction to 12 hours is that Regulatory Guide 1.93 (Ref. 8) allows a Completion Time of 24 hours for two required offsite circuits inoperable, based upon the assumption that two complete safety divisions are OPERABLE. When a concurrent redundant required feature failure exists, this assumption is not the case, and a shorter Completion Time of 12 hours is appropriate. These features are designed with redundant safety related divisions (i.e.,

(continued)

BASES

ACTIONS

A.1 (continued)

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 power distribution subsystems could result in the minimum required ESF functions not being supported. Therefore, the required AC buses, load centers, motor control centers, and distribution panels must be restored to OPERABLE status within 8 hours.

The Condition A worst scenario is one division without AC power (i.e., no offsite power to the division and the associated DG inoperable). In this situation, 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).")

Delete

~~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 LCO 3.8.8.a, b, or c. If Condition A is entered while, for instance, a DG electrical power distribution subsystem is inoperable and subsequently returned OPERABLE, LCO 3.8.8.a, b, or c 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 LCO 3.8.8.a, b, or c, to restore the AC electrical power~~

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BASES

ACTIONS

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A.1 (continued)

~~distribution system. At this time, a DC bus could again become inoperable, and the AC electrical power distribution subsystem 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 LGO 3.8.8.a, b, or c 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 LGO 3.8.8.a, b, or c indefinitely.~~

B.1

With one or more Division 1 and 2 120 VAC uninterruptible panels inoperable and a loss of function has not yet occurred, the remaining 120 VAC uninterruptible panels are capable of supporting the minimum safety functions necessary to shut down and maintain the unit in the safe shutdown condition. Overall reliability is reduced, however, because an additional single failure could result in the minimum required ESF functions not being supported. Therefore, the 120 VAC uninterruptible electrical power distribution subsystem(s) must be restored to OPERABLE status within 8 hours by powering the bus from the associated emergency UPS inverter via inverted DC, inverter using internal AC source/rectifier, or Class 1E regulating transformer.

Condition B worst scenario is one 120 VAC uninterruptible electrical power distribution subsystem without power; potentially both the DC source and the associated AC source nonfunctioning. In this situation, the plant is significantly more vulnerable to a complete loss of all uninterruptible 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 120 VAC uninterruptible electrical power distribution subsystem, and restoring power to the affected 120 VAC uninterruptible electrical power distribution subsystem(s).

This 8 hour limit is more conservative than Completion Times allowed for the majority of components that are without adequate 120 VAC uninterruptible power. Taking exception to

(continued)

BASES

ACTIONS

B.1 (continued)

LCO 3.0.2 for components without adequate 120 VAC uninterruptible power, that would have Required Action Completion Times shorter than 8 hours if declared inoperable, 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 adequate 120 VAC uninterruptible power, while not providing sufficient time for the operators to perform the necessary evaluations and actions to restore power to the affected division;
- c. The potential for an event in conjunction with a single failure of a redundant component.

The 8 hour Completion Time takes into account the importance to safety of restoring the 120 VAC uninterruptible electrical power distribution subsystems to OPERABLE status, the redundant capability afforded by the remaining 120 VAC uninterruptible electrical power distribution subsystems, and the low probability of a DBA occurring during this period.

Delete

~~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 LCO 3.8.8.a, b, or c. If Condition B is entered while, for instance, an AC electrical power distribution subsystem is inoperable and subsequently returned OPERABLE, LCO 3.8.8.a, b, or c may already have been not met for up to 8 hours. This situation could lead to a total duration of 16 hours, since initial failure of LCO 3.8.8.a, b, or c, for restoring the 120 VAC uninterruptible electrical power distribution subsystems. At this time, an AC electrical power distribution subsystem could again become inoperable, and 120 VAC uninterruptible electrical power distribution subsystem could be restored to OPERABLE. This could continue indefinitely.~~

(continued)

BASES

ACTIONS

Delete

B.1 (continued)

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 LCO 3.8.8.a, b, or c was initially not met, instead of at the time that Condition B was entered. The 16 hour Completion Time is an acceptable limitation on this potential of failing to meet LCO 3.8.8.a, b, or c indefinitely.

C.1

With one or more Division 1 and 2 DC buses inoperable and a loss of function has not yet occurred, the remaining DC 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 DC electrical power distribution subsystems could result in the minimum required ESF functions not being supported. Therefore, the required DC electrical power distribution subsystem(s) must be restored to OPERABLE status within 2 hours by powering the bus from the associated battery or charger.

Condition C worst scenario is one division without adequate DC power, potentially with both the battery significantly degraded and the associated charger 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 division, and restoring power to the affected division(s).

This 2 hour limit is more conservative than Completion Times allowed for the majority of components that could be without power. Taking exception to LCO 3.0.2 for components without adequate DC power, that would have Required Action Completion Times shorter than 2 hours, is acceptable because of:

(continued)

BASES

ACTIONS

C.1 (continued)

- 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; and
- c. The potential for an event in conjunction with a single failure of a redundant component.

The 2 hour Completion Time for DC electrical power distribution subsystems is consistent with Regulatory Guide 1.93 (Ref. 4).

Delete

~~The second Completion Time for Required Action C.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 LCO 3.8.8.a, b, or c. If Condition C is entered while, for instance, an AC electrical power distribution subsystem is inoperable and subsequently returned OPERABLE, LCO 3.8.8.a, b, or c 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 LCO 3.8.8.a, b, or c, to restore the DC electrical power distribution system. At this time, an AC electrical power distribution subsystem could again become inoperable, and DC electrical power 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 allowance results in establishing the "time zero" at the time LCO 3.8.8.a, b, or c was initially not met, instead of the time Condition C was entered. The 16-hour Completion Time is an acceptable limitation on this potential of failing to meet LCO 3.8.8.a, b, or c indefinitely.~~

(continued)