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December 19, 2003

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

Ladies and Gentlemen: ULNRC-04917

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
REVISION OF LICENSE AMENDMENT REQUEST OL-1225
REGARDING PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS
FOR EXTENSION OF
REQUIRED ACTION COMPLETION TIMES FOR DIESEL GENERATORS

Reference 1: AmerenUE Letter ULNRC-04866, "License Amendment Request OL-1225 – Revision to Technical Specifications for Extension of Required Action Completion Time for Diesel Generators," dated June 27, 2003

Per Reference 1, Union Electric Company (AmerenUE) submitted to the NRC an application for amendment of the Callaway Facility Operating License (License No. NPF-30). The essential change requested per that application (which is still under review by the NRC staff) is to revise Technical Specification (TS) 3.8.1, "AC Sources – Operating," in order to extend the Required Action Completion Time [or allowed outage time (AOT)] for an inoperable diesel generator, based on a risk-informed evaluation of the longer Completion Time. Also included were changes to TS 3.8.1 and other Technical Specifications to incorporate the changes addressed by Industry/Technical Specification Task Force (TSTF) Standard Technical Specification (STS) change TSTF-439, Revision 1, for eliminating so-called "second" Completion Times from the Required Actions within the Limiting Conditions for Operation (LCO) sections of the affected Technical Specifications. These changes were requested, in part, to support the increased DG AOT because, in lieu of eliminating the second Completion Times, the second Completion Times specified in TS 3.8.1 would have to be increased to accommodate the longer DG AOT.

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Recent discussions with the NRC staff regarding these changes have confirmed, however, that TSTF-439 (Rev. 1) will not be approved in the near future and that, for now, the most appropriate approach would be to extend the affected second Completion Times under TS 3.8.1 to accommodate the extended DG AOT, rather than eliminating second Completion Times altogether. Pursuant to this determination, therefore, AmerenUE is revising the changes proposed in its June 27 application (Reference 1) with respect to second Completion Times, and hereby submits this revision/supplement to the amendment application. The primary change and supporting information provided in the original amendment application regarding extension of the DG AOT itself remain valid and unchanged. Hence, that information is not repeated or re-provided in this revision/supplement to the amendment application.

Essential information pertaining to the new changes addressed in this submittal is provided in the attachments to this letter. The revised changes to the affected Technical Specifications are reflected in Attachment 2, which consists of marked-up pages from the Technical Specifications, and in Attachment 3 which provides the revised Technical Specification pages as they would appear with the proposed changes/mark-ups incorporated. These attachments include the changes being made for the extended DG AOT, and therefore, they supersede the marked-up and revised pages previously provided in Attachments 3 and 4 of the Reference 1 application, respectively. Attachment 1 provides the basis and a more detailed explanation of the new changes regarding second Completion Times. Since the changes necessitate revising the TS Bases changes that were provided for information in the Reference 1 amendment application, new TS Bases mark-ups are provided in Attachment 4. Because the marked-up TS Bases pages also include those changes related to the DG AOT extension, they too supersede the previously provided marked-up TS Bases pages. As noted in the original amendment application, the Bases changes are provided for information only, and will be implemented pursuant to the TS Bases Control Program, TS 5.5.14, upon approval of the requested license amendment.

Two evaluations were included in the Reference 1 amendment application: a Basis for No Significant Hazards Evaluation, and an environmental impact evaluation. The latter remains unchanged by the new Technical Specification changes; however, the Basis for No Significant Hazards evaluation requires revision. That evaluation, as originally provided, was essentially divided into two parts: One part addressed the proposed DG AOT extension (which remains unchanged); the other part addressed elimination of the second Completion Times. Only the latter requires revision due to the new approach being taken for resolving second Completion Times. A new evaluation addressing the second Completion Time changes is therefore provided, and it is included in Attachment 1.

This revision/supplement to the Reference 1 amendment application is provided to facilitate review and approval of the proposed amendment by the NRC staff. It is now anticipated that the resultant license amendment (if approved) will be effective upon issuance, to be implemented within 90 days from the date of issuance (as opposed to the 60-day implementation period anticipated in the Reference 1 submittal). This revision/supplement to AmerenUE's amendment application was approved by the Onsite Review Committee and the Nuclear Safety Review Board for Callaway. In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Missouri State official.

Please contact us for any questions you may have regarding the amendment application, including this revision/supplement.

Very truly yours,

Keith D. Young
Manager – Regulatory Affairs

TBE/mlo

Attachment: 1 – Evaluation (Background, Basis and Supporting Information)
2 – Marked-Up Technical Specifications
3 – Revised Technical Specifications (as Proposed)
4 – TS Bases Changes (For Information Only)

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STATE OF MISSOURI)
) S S
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Keith D. Young, of lawful age, being first duly sworn upon oath says that he is Manager, Regulatory Affairs, for Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Keith D. Young
Keith D. Young
Manager, Regulatory Affairs

SUBSCRIBED and sworn to before me this 19th day of December, 2003.

TERRA E. COOK
Notary Public - Notary Seal
STATE OF MISSOURI
Callaway County
My Commission Expires May 13, 2006

Terra E. Cook

1.0 DESCRIPTION

As indicated in the cover letter, and as further explained in Sections 3.0 and 4.0 of this attachment, AmerenUE is proposing to extend the "second" Completion Times specified for Required Actions A.3 and B.4 of Technical Specification (TS) 3.8.1 to accommodate the extended diesel generator (DG) allowed outage time (AOT) being proposed. This is in lieu of previously submitted changes to eliminate the existing "second" Completion Times altogether from this TS (and other Technical Specifications). Second Completion Times are specified in the Technical Specifications to limit the total amount of time that a Limiting Condition for Operations (LCO) is not met when Conditions/Required Actions under that LCO are alternately entered due to successive, overlapping system or component failures. The proposed changes enforce this intent, but at the same time ensure that the "second" Completion Time specified per each of these Required Actions would not be more limiting than the extended DG AOT / Completion Time.

The extended "second" Completion Times would only be able to be used when Condition B of TS 3.8.1 has been entered with the extended Completion Time (DG AOT) of Required Action B.4 in effect. Because the extended "second" Completion Times are conditional, they are being incorporated in the form a Note that precedes and is attached to the existing Completion Times for each of the affected Required Actions (i.e., A.3 and B.4). For Required Action B.4, where the extended DG AOT / Completion Time is to be specified, the Note to be added will also include the extended DG AOT / Completion Time itself. This is a format change for the extended DG AOT / Completion Time relative to the manner in which this Completion Time was originally proposed to be incorporated (per Reference 1), but there is no change in the effect or intent of this Completion Time.

It is important to note that, per the original amendment application (Reference 1), the proposed changes for eliminating 'second" Completion Times involved changes to TS 1.3, "Completion Times" (including Example 1.3-3 under that TS); TS 3.6.6, "Containment Spray and Cooling Systems"; TS 3.7.5, "Auxiliary Feedwater (AFW) System"; and TS 3.8.9, "Distribution Systems – Operating." Due to the new, more limited approach now being taken to resolve the second Completion Times for TS 3.8.1, all of the proposed changes to Technical Specifications 1.3, 3.6.6, 3.7.5 and 3.8.9 are being withdrawn such that no changes are now proposed for those Technical Specifications.

2.0 PROPOSED CHANGES

The following specific changes are proposed for Technical Specification 3.8.1, "AC Sources – Operating." The changes include the extended DG AOT proposed in AmerenUE's original amendment application (albeit in a different format) as well as the new/additional second Completion Times for TS 3.8.1 (which, as noted above, are in lieu of what was proposed previously).

- For Required Action B.4 (which applies when a diesel generator is declared or rendered inoperable), insert a Note in the Completion Time column for this Action, just above "72 hours AND 6 days from discovery of failure to meet LCO," that reads as follows:

> ----------Note----------
> A Completion Time of 108 hours AND 180 hours from discovery of failure to meet the LCO may be used once per cycle per DG.
> ----------

Included within this note is the originally proposed alternative 108-hour extended DG AOT / Completion Time as well as the new/alternative "second" Completion Time of 180 hours (i.e., 7-1/2 days) from discovery of failure to meet the LCO, which is longer than the existing "second" Completion Time of 6 days from discovery of failure to meet the LCO. Both of the alternative Completion Times specified in the Note are provisional since they can only be used once per cycle per DG. Otherwise, the existing Completion Times of 72 hours AND 6 days from discovery of failure to meet the LCO are to be applied. In other words, only one of the two Completion Times of each type can apply at a time. This change, including the basis for the second Completion time of 180 hours, is further explained in Section 4.0.

- For Required Action A.3 (which applies when an off-site circuit is declared or rendered inoperable), insert a Note in the Completion Time column for this Action, just above "6 days from discovery of failure to meet LCO," that reads as follows:

> ----------Note----------
> A Completion Time of 180 hours from discovery of failure to meet the LCO may be used with the 108-hour Completion Time of Required Action B.4 for an inoperable DG.
> ----------

This Note is similar to the Note for Required Action B.4 except that it only specifies a "second" Completion Time. The provisional alternative "second" Completion Time specified per this Note is to be applied only once per cycle per DG, i.e., only when Condition B has been entered with the extended DG AOT / Completion Time in effect. Otherwise, the existing "second" Completion Time of 6 days from discovery of failure to meet the LCO applies.

All of the above changes are reflected on the marked-up and revised TS pages provided in Attachments 2 and 3, respectively. In addition, the associated TS Bases will be revised to reflect the proposed TS changes. A marked-up copy of the proposed TS Bases changes is provided in Attachment 4 for information only. The TS Bases changes will be implemented in accordance

with TS 5.5.14, "Technical Specifications (TS) Bases Control Program," as part of the implementation of this amendment after NRC approval.

3.0 BACKGROUND

As proposed in AmerenUE's original amendment application (Reference 1), two sets of changes were (or are being) proposed for the Callaway Technical Specifications. First and foremost is the proposed extension of the DG AOT / Completion Time from 72 hours to 108 hours when applied to an inoperable DG that is removed from service for preplanned preventive maintenance during plant operation. This change, as described in AmerenUE's original amendment application, is based on the methodology provided in WCAP-15622, "Risk-informed Evaluation of Extensions to AC Electrical Power System Completion Times," and associated Industry/Technical Specification Task Force (TSTF) Standard Technical Specification (STS) change TSTF-417, Rev. 0. In conjunction with those documents, a plant-specific probabilistic risk assessment was performed to establish the longer DG AOT. The overall approach taken was consistent with the guidance of Regulatory Guides 1.174 and 1.177, as discussed in the amendment application of Reference 1. As previously noted, the proposed DG AOT change is not being changed by this follow-up submittal (except in format due to the other changes proposed per this submittal).

It is important to note that the risk-based approach to establishing the longer DG AOT / Completion Time is different than the means by which the generic, previous Completion Times specified in the Standard Technical Specifications were established. In lieu of a quantitative risk-based approach, the latter were "deterministically" based on industry experience and/or engineering judgment including such considerations as the Operability of redundant systems, trains or components and the qualitative consideration of the low probability of a challenging event occurring while the Completion Time is in effect.

The second set of changes addressed in AmerenUE's original application was to be applied to TS 3.8.1 and other Technical Specifications to incorporate the changes addressed by TSTF-439, Revision 1, for eliminating "second" Completion Times from the Required Actions within the Limiting Conditions for Operation (LCO) sections of the affected Technical Specifications. "Second" Completion Times limit the overall time that the associated LCO may not be met from initial entry into a Condition of the LCO through and including any successive, overlapping entry (or entries) into another Condition(s) and/or re-entry into the same Condition(s), within the LCO. (The intent, in other words, is to limit the potential chaining of Conditions/Required Actions due to contiguous or overlapping component/system failures). Extending the Completion Time / AOT for an inoperable component or system addressed by an LCO necessitates revising the second Completion Times since the second Completion Time could otherwise be more limiting than the extended Completion Time and thus would negate the effect of the extended Completion Time.

TSTF-439, Rev. 0 supported removal of second Completion Times altogether from applicable LCOs, including the LCO section of TS 3.8.1. This approach was preferred to extending the

second Completion Times wherever a potential conflict could occur from incorporation of a WCAP-supported, extended system or component AOT / Completion Time (such as in TS 3.8.1). Justification for deletion of "second" Completion Times is provided in TSTF-439, Rev. 0 but NRC approval has not yet been obtained. Discussions with the NRC on the justification and approach taken by the TSTF continue, but it is now apparent that approval will not occur in the near future.

At the time when WCAP-15622 and corresponding TSTF-417 were prepared, sufficient time had not yet been allowed for NRC review of TSTF-439 (Rev. 0), so the deletion of "second" Completion Times was not an option considered during the development of these documents. Instead, the approach taken in WCAP-15622 and TSTF-417 was to simply extend the second Completion Times in any applicable LCO where an individual component/system AOT / Completion Time was being extended, in order to accommodate the extended Completion Time. This was done by simply adding the individual Completion Times within the LCO to establish the "second" Completion Times. Such an approach was viewed to be consistent with the manner in which "second" Completion Times were established in the Standard Technical Specifications.

Basis for "Second" Completion Times

The TS Bases provide the basis for second Completion Times, and the basis description is generally the same for wherever second Completion Times are specified in the Technical Specifications. The following is taken from the TS Bases for Required Action A.3:

> The second 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 (so that Condition D is also entered) and that DG is subsequently returned to OPERABLE status (thus allowing Condition D to be exited), the LCO may already have been not met for up to 72 hours. This could lead to a total of 144 hours (6 days) since initial failure to meet the LCO, to restore the offsite circuit. At this time, a DG could again become inoperable, and an additional 72 hours allowed prior to complete restoration of the LCO. Although highly unlikely, this could continue indefinitely if not limited. 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 or contiguously. In effect, it limits the total amount of time within which Conditions A, B, and D, for example, may be alternately in effect. The "AND" connector between the 72-hour and 6-day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.

The above addresses a particular sequence of Condition/Required Action entries, but other sequences or scenarios are possible. In any case, the intent is to limit the total time that an LCO

cannot be met when Conditions within the LCO are entered contiguously or in overlapping manner.

Consistent with the above, the approach originally taken in establishing the generic "second" Completion Times specified in the Standard Technical Specifications was to consider each Condition, under a particular LCO, that might be separately (and thus successively) entered for each component or subsystem failure addressed within the LCO, and then add the Completion Times from the associated Required Actions together to establish an appropriate "second" Completion Time that would apply to effectively limit the overall time that the LCO cannot be met. For example, in the LCO section of TS 3.8.1, Condition A addresses having an offsite circuit inoperable, and Condition B addresses having a diesel generator inoperable. (There is also a Condition that addresses having both an offsite circuit and a diesel generator inoperable, i.e., Condition D.) For each of Conditions A and B, there is a Required Action that requires restoring the inoperable source within a specified Completion Time. Per the Standard Technical Specifications, the Completion Time for each of those Required Actions/Conditions is 72 hours (3 days). For each of those Conditions/Required Actions, a second Completion Time is specified that requires restoration of the inoperable source within a certain time from discovery of failure to meet the LCO. That specified time is 6 days, and was determined by simply adding the Completion Time (AOT) for an inoperable offsite circuit (3 days) to the Completion Time (AOT) for an inoperable diesel generator (3 days). The limit was thus administratively determined based on adding the "deterministically" determined Completion Times specified for individual, inoperable AC sources.

As discussed above, the effect of the second Completion Time is to limit the total time that the LCO is not met when Conditions within the LCO are entered contiguously or in an overlapping manner. Such events are rare since for the "second" Completion time to be challenged and most limiting, multiple entries into Conditions under the LCO are required (which means multiple component/system failures must occur) and must be close enough together in time to overlap and thus comprise an extended, continuous period of failing to meet the LCO.

Approach Taken per WCAP-15622 and TSTF-417

The approach taken in WCAP-15622 and TSTF-417 to reconcile "second" Completion Times with the new extended, individual system/component Completion Times was essentially the same as the approach originally taken in the Standard Technical Specifications. That is, the second Completion Time would continue to be based on adding the individual system/component Completion Times together, even if one of the individual system/component times was to be extended. Thus, if an individual Completion Time under a particular LCO was being extended by a certain amount on a risk-informed basis, the associated second Completion Times under that LCO were to be extended by the same amount.

During the NRC staff's review of WCAP 15622 and TSTF-417 (along with a similar document prepared by the Combustion Engineering plant owners' group, CE NSPD-1045, "Joint Applications Report, Modification to the Containment Spray System and the Low Pressure Safety Injection System Technical Specifications," and associated TSTF-409), however, the

NRC staff identified a concern regarding the approach being taken for second Completion Times. A letter from the NRC was sent to NEI in November 2001, wherein the NRC staff indicated that increases in Improved Standard Technical Specification Completion Time limits by adding together risk-informed and deterministic values using engineering judgment would not be approved.

On the basis of the NRC letter, it appeared that an impasse had been reached earlier this year (2003) regarding the approach taken to address second Completion Times in the noted topical reports and TSTF document. TSTF-439 appeared to offer an alternative approach even though it too had not yet been approved by the NRC staff. AmerenUE therefore determined that in its amendment application to extend the DG AOT (Completion Time) under TS 3.8.1, TSTF-439 would be cited as a basis for eliminating the second Completion Times. This would accommodate the proposed, increased DG AOT by avoiding any conflict with second Completion Times, and would avoid the issue that had been identified with extending second Completion Times to accommodate individual, extended Completion Times. TSTF-439 appeared to provide a viable argument for why second Completion Times are not needed in light of more recently established regulatory requirements [particularly the Maintenance Rule, 10 CFR 50.65) that require increased focus on equipment performance and high reliability (to which extended equipment inoperability times are not conducive), in light of the administrative and arbitrary nature of the time limits for second Completion Times, and in light of the very rare occurrence of second Completion Times ever being challenged.

Recent Developments

Subsequent to AmerenUE's June 27, 2003 amendment application, continued discussions with the NRC on the subject of second Completion Times have led to further resolution of the above issue. In September (2003), the NRC indicated that upon further consideration of this issue, including consideration of a precedent amendment request that had been approved (Reference 5), it is acceptable to increase or establish second Completion Times by adding together risk-informed and deterministic values. Progress has also been made in defining an approach that could facilitate review and approval of TSTF-439; however, that process will apparently take more time.

As a result of these developments, AmerenUE determined to revise it amendment request to modify the second Completion Times specified in TS 3.8.1 by adding the new risk-informed DG AOT (of 108 hours) to the existing "deterministic" 72-hour Completion Time specified in the Required Actions for Conditions A and B in TS 3.8.1, thereby establishing a new, alternative second Completion Time of 180 hours for each of these Required Actions. This change would supersede the previously proposed changes for eliminating second Completion Times altogether from TS 3.8.1 (and from all of the other affected Technical Specifications).

4.0 TECHNICAL ANALYSIS

As discussed previously, the second Completion Time is included in the Completion Time for certain Required Actions to establish a limit on the maximum time allowed for any combination of Conditions of inoperability that would constitute a prolonged continuous failure to meet the LCO. It precludes the potential alternating entry into (and exit from) the Required Actions within the same LCO over indefinite periods of time by providing a limit on the amount of time that the LCO is not met.

For the reasons discussed in Section 3.0 above, changes are now being proposed to incorporate new/extended second Completion Times in TS 3.8.1 to accommodate the new, extended DG AOT that is being proposed. As established per the Standard Technical Specifications, Second Completion Times are already specified in TS 3.8.1 to accommodate the Completion Times currently specified for Required Actions A.3 (for an inoperable offsite circuit) and B.4 (for an inoperable diesel generator). Under Required Action A.3 of the current LCO of TS 3.8.1, a Completion Time of 72 hours is specified as the first Completion Time for restoration of an inoperable offsite circuit, AND a Completion Time of "6 days from discovery of failure to meet the LCO" is specified as the second Completion Time for restoring overall compliance with the LCO. Likewise, under Required Action B.4, a Completion Time of 72 hours is specified as the first Completion Time for restoration of an inoperable diesel generator, AND a Completion Time of "6 days from discovery of failure to meet the LCO" is specified as the second Completion Time for restoring overall compliance with the LCO. (The "AND" connector between the first and second Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.)

The new/extended second Completion Times are additional Completion Times that would be in effect only when entry into Condition A or Condition B has been made with the 108-hour Completion Time of required Action B.4 in effect. Since the extended DG AOT / Completion Time is allowed to be applied only once per cycle for each diesel generator, the new/additional. second Completion Times would also only be able to be applied once per cycle per diesel generator. The new/additional second Completion Times are thus provisional and are not the second Completion Times that would normally apply. They cannot be in effect at the same time as the current second Completion Times, just as the proposed, extended DG AOT / Completion Time cannot be in effect at the same time as the existing 72-hour Completion Time for an inoperable diesel generator.

The intent is to incorporate the new/additional second Completion Times into TS 3.8.1 in as clear a manner as possible that maintains the required format, does not complicate the appearance of the TS, and facilitates compliance. It is thus proposed that they be incorporated in the form a Note attached to the existing Completion Times. The effect of the Note is to modify the Completion Times when the Note is in effect. The addition of the proposed Note to Required Action A.3 and Required Action B.4 provides (for each) a second Completion Time of 180 hours (7½ days) days from discovery of failure to meet the LCO. The 7½-day second Completion Time accommodates the new, 108-hour extended Completion Time (AOT) for an inoperable diesel generator, and was determined by adding the risk-informed DG AOT of 108 hours to the

existing deterministic Completion Time of 72 hours specified for Required Actions A.3 and B.4, for an inoperable off-site circuit and inoperable diesel generator, respectively.

As noted in Section 3.0, the NRC has recently indicated its acceptance of this approach, as it is consistent with what was approved per Reference 5 with regard to precedent license amendments. The new, extended second Completion Times preserve the intent of such Completion Times, i.e., to limit successive/alternating entries (and exits) from Conditions within the TS LCO, but at the same time, ensure that the second Completion Times of TS 3.8.1 are not more limiting then the extended DG AOT / Completion Time being proposed.

5.0 REGULATORY ANALYSIS

AmerenUE has evaluated whether or not a significant hazards consideration is involved with the proposed changes to the "second" Completion Times specified in TS 3.8.1 by focusing on the standards set forth in 10 CFR 50.92, "Issuance of amendments," as discussed below:

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

Response: No

The proposed changes for increasing the "second" Completion Times under TS 3.8.1 do not affect the design, operational characteristics, or intended functions of the equipment addressed by TS 3.8.1. With no direct effects on the subject equipment (or any other plant equipment or features), the proposed "second" Completion Time changes are not associated with any initiating condition for any accident previously evaluated, and therefore would not affect the probability of such accidents. Further, the consequences of evaluated accidents are independent of mitigating equipment allowed outage times as long as adequate availability of the equipment is ensured.

"Second" Completion Times are primarily administrative in nature and are only intended to prevent successive, overlapping or contiguous entries and exits from Conditions within a Technical Specification LCO, which could otherwise result in an extended period of time for which the LCO is not met. The new, extended "second" Completion Times preserve this intent and were determined by the same method used to establish the original/existing second Completion Time limits, albeit with a longer, risk-informed Completion Time established for an inoperable diesel generator.

The proposed changes to the "second" Completion Times of TS 3.8.1 support the extended Completion Time / AOT specified for an inoperable diesel generator as proposed in AmerenUE's June 27, 2003 amendment application (Reference 1). The acceptability and conformance to regulatory guidance for that change is addressed in Reference 1, and the conclusions reached therein, including those reached with respect to significant hazards consideration, remain unchanged for that proposed change.

Therefore, the proposed changes do 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 accident from any accident previously evaluated?

Response: No.

The proposed changes are primarily administrative in nature and do not involve a change in the design, configuration, or operational characteristics of the plant. No physical alteration of the plant is involved, as no new or different type of equipment is to be installed. The changes do not alter any assumptions made in the safety analyses, and no alteration in the procedures for ensuring that the plant remains within analyzed limits is involved. As such, no new failure modes or mechanisms that could cause a new or different kind of accident from any previously evaluated are being introduced.

Therefore, the proposed changes do not create the possibility of a new or different accident from any accident previously evaluated.

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

Response: No.

The proposed changes to the affected second Completion Times do not alter the manner in which safety limits or limiting safety system settings are determined. The safety analysis acceptance criteria are not impacted by this change, and the proposed changes will not permit plant operation in a configuration outside the design basis.

The proposed, extended second Completion Time limits were established in the same manner as the original limits, and meet the same intent, except that a longer risk-informed DG AOT has been used to establish the proposed second Completion Time limits The basis and acceptability of that time limit is addressed in the June 27, 2003 amendment application (as supported by this supplement/revision), and the conclusions reached therein still apply, including those reached with respect to significant hazards consideration.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

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

5.2 Applicable Regulatory Requirements/Criteria

The proposed changes to the "second" Completion Times of TS 3.8.1 support the extended Completion Time / AOT specified for an inoperable diesel generator as proposed in

AmerenUE's June 27, 2003 amendment application (Reference 1). The acceptability and conformance to regulatory guidance for that change is addressed in Reference 1 and the conclusions reached therein remain unchanged. "Second" Completion Times are administrative in nature and are only intended to prevent successive, overlapping or contiguous entries and exits from Conditions within an LCO that could otherwise result in an extended period of time for which the LCO is not met. The new, extended "second" Completion Times preserve that intent and were determined by the same method used to establish the original/existing second Completion Time limits, albeit with the longer, risk-informed Completion Time proposed for an inoperable diesel generator.

Based on the 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 approval of the proposed change will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

AmerenUE has evaluated the proposed TS changes and has determined that the proposed changes 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. [Note: This same conclusion was reached for the changes proposed in AmerenUE's original amendment application (Reference 1). The changes under this revision or supplement to that amendment application therefore do not result in a different conclusion.]

7.0 REFERENCES

7.1 References

1. AmerenUE Letter ULNRC-04866, "License Amendment Request OL-1225 – Revision to Technical Specification for Extension of Required Action Completion Time for Diesel Generators," dated June 27, 2003

2. Westinghouse Owners Group Topical Report WCAP-15622, "Risk-Informed Evaluation of Extensions to AC Electrical Power System Completion Times," Non-Proprietary Class 3

3. Industry/Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler TSTF-417, "AC Electrical Power System Completion Times (WCAP-15622)," Revision 0

4. Industry/TSTF STS Change Traveler TSTF-439, "Eliminate Second Completion Times Limiting Time from Discovery of Failure to Meet an LCO," Revision 1

5. NRC Letter, D. Jaffe to W. Eaton, "Grand Gulf Nuclear Station, Unit 1, Issuance of Amendment re: Extended Allowed Outage Time for Diesel Generators (TAC No. MB3973)," dated July 16, 2002

7.2 Precedents

With respect to second Completion Times, the proposed changes are consistent with Amendment No. 151 of the Operating License for Grand Gulf Nuclear Station (Unit 1) [per Reference 5 above)].

Attachment 2
ULNRC-04917

MARKED-UP TECHNICAL SPECIFICATIONS

No changes to this page.
Provided only for context/continuity.

3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources - Operating

LCO 3.8.1 The following AC electrical sources shall be OPERABLE:

a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System; and

b. Two diesel generators (DGs) capable of supplying the onsite Class 1E power distribution subsystem(s); and

c. Load Shedder and Emergency Load Sequencer (LSELS) for Train A and Train B.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One offsite circuit inoperable.	A.1	Perform SR 3.8.1.1 for OPERABLE offsite circuit.	1 hour AND Once per 8 hours thereafter
	AND		
	A.2	---------- NOTE ---------- In Modes 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. ----------	

(continued)

ACTIONS

CONDITION		REQUIRED ACTION	COMPLETION TIME
A. One offsite circuit inoperable. (continued)		Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.	24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)
	AND		
	A.3	Restore offsite circuit to OPERABLE status.	72 hours AND 6 days from discovery of failure to meet LCO
B. One DG inoperable.	B.1	Perform SR 3.8.1.1 for the offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND		
	B.2	---------- NOTE ---------- In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. ----------	

(continued)

----------NOTE----------
A Completion Time of 180 hours from discovery of failure to meet the LCO may be used with the 108-hour Completion Time of Required Action B.4 for an inoperable DG.

ACTIONS

CONDITION		REQUIRED ACTION	COMPLETION TIME
B. One DG inoperable. (continued)		Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable.	4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)
	AND		
	B.3.1	Determine OPERABLE DG is not inoperable due to common cause failure.	24 hours
	OR		
	B.3.2	---------- NOTE ---------- The required ACTION of B.3.2 is satisfied by the automatic start and sequence loading of the diesel generator. ----------	
		Perform SR 3.8.1.2 for OPERABLE DG.	24 hours
	AND		
	B.4	Restore DG to OPERABLE status.	72 hours AND 6 days from discovery of failure to meet LCO

----------NOTE----------
A Completion Time of 108 hours AND 180 hours from discovery of failure to meet the LCO may be used once per cycle per DG.

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Two offsite circuits inoperable.	C.1 ---------- NOTE ---------- In Modes 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. ---------- Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.	12 hours from discovery of Condition C concurrent with inoperability of redundant required features
	AND	
	C.2 Restore one offsite circuit to OPERABLE status.	24 hours
D. One offsite circuit inoperable. AND One DG inoperable.	---------- NOTE ---------- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating," when Condition D is entered with no AC power source to any train. ----------	
	D.1 Restore offsite circuit to OPERABLE status.	12 hours
	OR	
	D.2 Restore DG to OPERABLE status.	12 hours

(continued)

No changes to this page. Provided only for context/continuity.

REVISED TECHNICAL SPECIFICATIONS
(AS PROPOSED)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One offsite circuit inoperable. (continued)	Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.	24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)
	AND	
	A.3 Restore offsite circuit to OPERABLE status.	72 hours AND ------ NOTE ------ A Completion Time of 180 hours from discovery of failure to meet the LCO may be used with the 108-hour Completion Time of Required Action B.4 for an inoperable DG. --- 6 days from discovery of failure to meet LCO
B. One DG inoperable.	B.1 Perform SR 3.8.1.1 for the offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND	(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. One DG inoperable. (continued)	B.2	---------- NOTE ---------- In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. ----------	
		Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable.	4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)
	AND		
	B.3.1	Determine OPERABLE DG is not inoperable due to common cause failure.	24 hours
	OR		
	B.3.2	---------- NOTE ---------- The required ACTION of B.3.2 is satisfied by the automatic start and sequence loading of the diesel generator. ----------	
		Perform SR 3.8.1.2 for OPERABLE DG.	24 hours
	AND		(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One DG inoperable. (continued)	B.4 Restore DG to OPERABLE status.	------ NOTE ------ A Completion Time of 108 hours AND 180 hours from discovery of failure to meet the LCO may be used once per cycle per DG. --- 72 hours AND 6 days from discovery of failure to meet LCO
C. Two offsite circuits inoperable.	C.1 ---------- NOTE ---------- In Modes 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. --- Declare required feature(s) inoperable when its redundant required feature(s) is inoperable. AND C.2 Restore one offsite circuit to OPERABLE status.	12 hours from discovery of Condition C concurrent with inoperability of redundant required features 24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. One offsite circuit inoperable. AND One DG inoperable.	---------- NOTE ---------- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating," when Condition D is entered with no AC power source to any train. ----------		
	D.1	Restore offsite circuit to OPERABLE status.	12 hours
	OR		
	D.2	Restore DG to OPERABLE status.	12 hours
E. Two DGs inoperable.	E.1	Restore one DG to OPERABLE status.	2 hours
F. One required LSELS inoperable.	F.1	Declare the affected DG and offsite circuit inoperable.	Immediately
	AND		
	F.2	Restore required LSELS to OPERABLE status.	12 hours
G. Required Action and associated Completion Time of Condition A, B, C, D, E, or F not met.	G.1	Be in MODE 3.	6 hours
	AND		
	G.2	Be in MODE 5.	36 hours
H. Three or more AC sources inoperable.	H.1	Enter LCO 3.0.3.	Immediately

TS BASES CHANGES
(For Information Only)

BASES

LCO (continued)

No changes to this page. Provided only for context/continuity.

Initiating a DG start upon a detected undervoltage condition, tripping of the incoming offsite power upon a detected undervoltage or degraded voltage condition, shedding of nonessential loads, and proper sequencing of loads are required functions of LSELS and required for DG OPERABILITY. OPERABILITY of the undervoltage and degraded voltage instrumentation functions is addressed in LCO 3.3.5, "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation."

The AC sources in one train must be separate and independent (to the extent possible) of the AC sources in the other train. For the DGs, separation and independence are complete.

For the offsite AC sources, separation and independence are to the extent practical. A circuit may be connected to more than one ESF bus provided the appropriate LCO Required Actions are entered for loss of one offsite power source.

APPLICABILITY

The AC sources LSELS trains are required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that:

a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of AOOs or abnormal transients; and

b. Adequate core cooling is provided and containment OPERABILITY and other vital functions are maintained in the event of a postulated DBA.

The AC power requirements for MODES 5 and 6 are covered in LCO 3.8.2, "AC Sources - Shutdown."

ACTIONS

A.1

To ensure a highly reliable power source remains with one offsite circuit inoperable, it is necessary to verify the OPERABILITY 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 not met. However, if the second required circuit fails SR 3.8.1.1, the second offsite circuit is inoperable, and Condition C, for two offsite circuits inoperable, is entered.

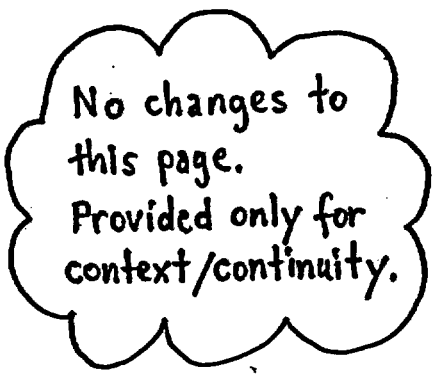
(continued)

BASES

ACTIONS (continued)

A.2

Required Action A.2, which only applies if the train cannot be powered from an offsite source, is intended to provide assurance that an event coincident with a single failure of the associated DG will not result in a complete loss of safety function of critical redundant required features. These features are powered from the redundant AC electrical power train. This includes motor driven auxiliary feedwater pumps and the turbine driven auxiliary feedwater pump which must be available for mitigation of a feedwater line break. Single train systems, other than the turbine driven auxiliary feedwater pump, are not included in this condition.



A Note is added to this Required Action stating that in MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. The reason for the Note is to confirm the OPERABILITY of the turbine driven auxiliary feedwater pump in this Condition, since the auxiliary feedwater pump is not by itself capable of providing 100% of the auxiliary feedwater flow assumed in the safety analysis.

The Completion Time for Required Action A.2 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. The train has no offsite power supplying its loads; and

b. A required feature on the other train is inoperable.

If at any time during the existence of Condition A (one offsite circuit inoperable) a redundant required feature subsequently becomes inoperable coincident with no offsite power to one train of the onsite Class IE Electrical Power Distribution System, this Completion Time begins to be tracked.

Discovering no offsite power to one train of the onsite Class 1E Electrical Power Distribution System coincident with one or more inoperable required support or supported features, or both, that are associated with the other train that has offsite power, results in starting the Completion Times for the Required Action. Twenty-four hours is acceptable because it minimizes risk while allowing time for restoration before subjecting the unit to transients associated with shutdown.

Required Action A.2 is no longer applicable when the train of onsite Class IE Electrical Power Distribution System is connected to the

(continued)

BASES

ACTIONS

A.2 (continued)

remaining OPERABLE offsite circuit. In this case, Required Actions A.1 and A.3 continue to apply.

The remaining OPERABLE offsite circuit and DGs are adequate to supply electrical power to Train A and Train B of the onsite Class 1E Distribution System. 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.

status (thus allowing Condition D to be exited)

A.3

According to Regulatory Guide 1.93 (Ref. 6), 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 unit 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.

(so that Condition D is also entered)

(6 days)

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

The second Completion Time for Required Action 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 72 hours. This 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 6 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 Completion Time must be met.

to

or contiquosly. In effect, it limits the total amount of time within which Conditions A, B, and D, for example, may be alternately in effect.

Although highly unlikely, this could continue indefinitely if not limited.

(continued)

BASES

ACTIONS

A.1 (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 will result in establishing the "time zero" at the time that the LCO was initially not met, instead of at the time Condition A was entered.

INSERT A

B.1

To ensure a highly reliable power source remains with an inoperable DG, it is necessary to verify the availability of the offsite circuits on a more frequent basis. Since the Required Action only specifies "perform," a failure 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 and Required Actions 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 trains. This includes motor driven auxiliary feedwater pumps and the turbine-driven auxiliary feedwater pump which must be available for mitigation of a feedwater line break. Redundant required feature failures consist of inoperable features associated with a train, redundant to the train that has an inoperable DG.

A Note is added to this Required Action stating that in MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. The reason for the Note is to confirm the OPERABILITY of the turbine driven auxiliary feedwater pump in this Condition, since the auxiliary feedwater pump is not by itself capable of providing 100% of the auxiliary feedwater flow assumed in the safety analysis.

The Completion Time for Required Action B.2 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

(continued)

INSERT A

Tracking the 6-day Completion Time is a requirement for beginning the Completion Time "clock" that is in addition to the normal Completion Time requirements. With respect to the 6-day Completion Time, "time zero" is specified as beginning at the time LCO 3.8.1 was initially not met, instead of at the time that Condition A was entered. This results in the requirement, when in this Condition, to track the time elapsed from both the Condition A "time zero," and the "time zero" when LCO 3.8.1 was initially not met. Refer to Section 1.3, "Completion Times," for a more detailed discussion regarding Completion Times, including those that apply "from discovery of failure to meet the LCO."

The Completion Time for Required Action A.3 is modified by a Note. The Note specifically modifies the second Completion Time (of 6 days from discovery of failure to meet the LCO) to conditionally establish a longer second Completion Time of 180 hours from discovery of failure to meet the LCO when entry into Condition B has also been made with the 108-hour Completion Time of Required Action B.4 in effect (which is allowed only once per cycle for each diesel generator).

The 180-hour Completion Time specified in the Note 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 already inoperable with the 108-hour Completion Time being applied, and that DG is subsequently restored to OPERABLE status, the LCO may already have been not met for up to 108 hours. This could lead to a total of 180 hours since initial failure to meet the LCO, to restore the offsite circuit. At this time, a DG could again become inoperable and an additional 72 hours allowed prior to complete restoration of the LCO. Although highly unlikely, this could continue indefinitely if not limited. The 180-hour 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 or contiguously. In effect, it limits the total amount of time within which Conditions A, B, and D, for example, may be alternately in effect.

Tracking the 180-hour Completion Time is a requirement for beginning the Completion Time "clock" that is in addition to the normal Completion Time requirements. With respect to the 180-hour Completion Time, "time zero" is specified as beginning at the time LCO 3.8.1 was initially not met, instead of at the time that Condition A was entered. This results in the requirement, when in this Condition, to track the time elapsed from both the Condition A "time zero," and the "time zero" when LCO 3.8.1 was initially not met. Refer to Section 1.3, "Completion Times," for a more detailed discussion regarding Completion Times, including those that apply "from discovery of failure to meet the LCO."

BASES

ACTIONS

B.2 (continued)

b. A required feature on the other train (Train A or Train B) is inoperable.

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

No changes to this page. Provided only for context/continuity.

Discovering one required DG inoperable coincident with one or more inoperable required support or supported features, or both, that are associated with the OPERABLE DG, results in starting the Completion Time for the Required Action. Four hours from the discovery of these events existing concurrently is Acceptable because it minimizes risk while allowing time for restoration before subjecting the unit to transients associated with shutdown.

In this Condition, the remaining OPERABLE DG and offsite circuits are adequate to supply electrical power to the onsite Class 1E Distribution System. Thus, on a component basis, single failure protection for the required feature's function may have been lost; however, function has not been lost. The 4 hour Completion Time takes into account the OPERABILITY of the redundant counterpart to the inoperable required feature. Additionally, the 4 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.

B.3.1 and B.3.2

Required Action B.3.1 provides an allowance to avoid unnecessary testing of the OPERABLE DG. If it can be determined that the cause of the inoperable DG does not exist on the OPERABLE DG. SR 3.8.1.2 does not have to be performed. If the DG was declared inoperable for preplanned preventive maintenance, testing, or maintenance to correct a condition which, if left uncorrected, would not affect the OPERABILITY of the DG, or for an inoperable Support System, or for an independently testable component, SR 3.8.1.2 does not have to be performed. If the cause of inoperability exists on the other DG, the other DG would be declared inoperable upon discovery and Condition E of LCO 3.8.1 would be entered. Once the failure is repaired, the common cause failure no longer exists, and Required Action B.3.1 is satisfied. If the cause of the initial inoperable DG cannot be confirmed not to exist on the remaining DG, performance of SR 3.8.1.2 suffices to provide assurance of continued OPERABILITY of that DG. Required Action B.3.2 is modified by a Note

(continued)

BASES

ACTIONS

B.3.1 and B.3.2 (continued)

stating that it is satisfied by the automatic start and sequence loading of the DG.

In the event the inoperable DG is restored to OPERABLE status prior to completing either B.3.1 or B.3.2, the plant corrective action program will continue to evaluate the common cause possibility. This continued evaluation, however, is no longer under the 24 hour constraint imposed while in Condition B.

According to Generic Letter 84-15 (Ref. 7), 24 hours is reasonable to confirm that the OPERABLE DG(s) is not affected by the same problem as the inoperable DG.

INSERT B

(of 6 days from discovery of failure to meet the LCO)

If the offsite circuit is restored to OPERABLE status within the required 72 hours,

compliance with the LCO (ie., restore the DG).

or contiguously. In effect, it limits the total amount of time within which Conditions A, B, and D, for example, may be alternately in effect.

Although highly unlikely, this could occur indefinitely if not limited.

B.4

According to Regulatory Guide 1.93 (Ref. 6), operation may continue in Condition B for a period that should not exceed 72 hours.

In Condition B, the remaining OPERABLE DG 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, a reasonable time for repairs, and the 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 could lead to a total of 144 hours, 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 9 days)~~ allowed prior to complete restoration of the LCO. The 6 day Completion Time provides a limit on 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 Completion Time 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 time "clock." This will

(continued)

INSERT B

In Condition B, the remaining OPERABLE DG and offsite circuits are adequate to supply electrical power to the onsite Class 1E Distribution System. With a DG inoperable, the inoperable DG must be restored to OPERABLE status within the applicable, specified Completion Time.

The Completion Time of 72 hours applies when a DG is discovered or determined to be inoperable, such as due to a component or test failure, and requires time to effect repairs, or it may apply when a DG is rendered inoperable for the performance of maintenance during applicable MODES. 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 during this period.

BASES

ACTIONS

B.4 (continued)

result in establishing the "time zero" at the time that the LCO was initially not met, instead of at the time Condition B was entered.

INSERT C

C.1 and C.2

Required Action C.1, which applies when two offsite circuits are inoperable, is intended to provide assurance that an event with a coincident single failure will not result in a complete loss of redundant required safety functions. The Completion Time for this failure of redundant required features is reduced to 12 hours from that allowed for one train without offsite power (Required Action A.2). The rationale for the reduction to 12 hours is that Regulatory Guide 1.93 (Ref. 6) allows a Completion Time of 24 hours for two required offsite circuits inoperable, based upon the assumption that two complete safety trains 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 powered from redundant AC safety trains. This includes motor driven auxiliary feedwater pumps and the turbine driven auxiliary feedwater pump which must be available for mitigation of a feedwater line break. Single train features, other than the turbine driven auxiliary feedwater pump, are not included in this Condition.

A Note is added to this Required Action stating that in MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. The reason for the Note is to confirm the OPERABILITY of the turbine driven auxiliary feedwater pump in this Condition, since the auxiliary feedwater pump is not by itself capable of providing 100% of the auxiliary feedwater flow assumed in the safety analysis.

The Completion Time for Required Action C.1 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. All required offsite circuits are inoperable; and

b. A required feature is inoperable.

If at any time during the existence of Condition C (two offsite circuits inoperable) a required feature becomes inoperable, this Completion Time begins to be tracked.

(continued)

INSERT C

Tracking the 6-day Completion Time is a requirement for beginning the Completion Time "clock" that is in addition to the normal Completion Time requirements. With respect to the 6-day Completion Time, "time zero" is specified as beginning at the time LCO 3.8.1 was initially not met, instead of at the time that Condition B was entered. This results in the requirement, when in this Condition, to track the time elapsed from both the Condition B "time zero," and the "time zero" when LCO 3.8.1 was initially not met. Refer to Section 1.3, "Completion Times," for a more detailed discussion regarding Completion Times, including those initiated "from discovery of failure to meet the LCO."

The Completion Times for Required Action B.4 are modified by a Note. For the first Completion Time, the Note modifies the normal 72-hour Completion Time to allow 108 hours for restoration on an inoperable DG when a DG is declared or rendered inoperable for the performance of voluntary, planned maintenance activities. The 108-hour Completion Time is a risk-informed allowed outage time (AOT) based on a plant-specific analysis using the methodology in WCAP-15622 (Reference 16). This extended DG AOT was established on the assumption that it is used only for voluntary planned maintenance, inspections and testing. Use of the modified Completion Time (extended DG AOT) is limited to once within an operating cycle (18 months) for each DG. Administrative controls for application of the extended DG AOT for voluntary planned maintenance activities ensure or require that:

a. The offsite power supply and switchyard conditions are conducive to an extended DG AOT, which includes ensuring that switchyard access is restricted and no elective maintenance within the switchyard is being performed that would challenge offsite power availability.

b. No equipment or systems assumed to be available in the probabilistic risk analysis for supporting the extended DG AOT are removed from service. The equipment or systems assumed to be available (including required support systems, i.e., associated room coolers, etc.) are as follows:

- Steam generator atmospheric relief valves
- Main steam isolation valves
- Auxiliary Feedwater System (all three trains)
- Chemical Volume and Control System [i.e., both centrifugal charging pump (CCP) trains]
- Essential Service Water System (both trains)
- Component Cooling Water System (both trains and all four pumps)
- Residual Heat Removal System (both trains)
- High Pressure (Intermediate Head) Coolant Injection System (i.e., both safety injection pump trains)

If, while the modified Completion Time (extended DG AOT) is in effect, one or more of the above systems or components is determined to be unavailable, the modified

Completion Time may remain in effect provided the effect on plant risk is assessed and any additional or compensatory actions are taken, in accordance with the plant's program for implementation of 10 CFR 50.65(a)(4).

The second Completion Time specified in the Note modifies the second Completion Time specified for Required Action B.4 (i.e., "6 days from discovery of failure to meet the LCO") to conditionally establish a longer second Completion Time of 180 hours from discovery of failure to meet the LCO. This modified second Completion Time is intended to be used in conjunction with the first modified Completion Time (of 108 hours) used for preplanned, preventive DG maintenance, and may therefore also be applied only once per cycle for each DG. The "AND" connector between the 108-hour and 180-hour Completion Times within the Note means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.

The modified second Completion Time (of 180 hours from discovery of failure to meet the LCO) establishes a limit on the maximum time allowed for possible combinations of required AC power sources being inoperable during any single contiguous occurrence of failing to meet the LCO, notwithstanding the reduced likelihood of such combinations due to the conditions or provisions that must be met for voluntary entry into Condition B for the performance of preplanned, preventive DG maintenance. If, for example, Condition B is entered (with the modified Completion Time in effect) and then an offsite source became inoperable at the end of the extended DG AOT, the LCO may have already been not met for up to 108 hours. If the offsite circuit were restored to OPERABLE status within the required 72 hours, the LCO may then have been not met for up to 180 hours. At that time, a diesel generator could then (again) become inoperable (such that Condition B is re-entered), and an additional 72 hours allowed to complete restoration of the LCO. Although highly unlikely, this could continue indefinitely if not limited. The 180-hour 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 or contiguously. In effect, it limits the total amount of time within which Conditions A, B, and D, for example, may be alternately in effect.

Tracking the modified second (180-hour) Completion Time is a requirement for beginning the Completion Time "clock" that is in addition to the normal Completion Time requirements. With respect to the 180-hour Completion Time, "time zero" is specified as beginning at the time LCO 3.8.1 was initially not met, instead of at the time that Condition B was entered (or re-entered, as in the above example). This results in the requirement, when in this Condition, to track the time elapsed from both the Condition B "time zero," and the "time zero" when LCO 3.8.1 was initially not met. Refer to Section 1.3, "Completion Times," for a more detailed discussion regarding Completion Times, including those that apply "from discovery of failure to meet the LCO."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.8.1.20

This Surveillance demonstrates that the DG starting independence has not been compromised. Also, this Surveillance demonstrates that each engine can achieve proper speed within the specified time when the DGs are started simultaneously.

The 10 year Frequency is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 9).

This SR is modified by a Note. The reason for the Note is to minimize wear on the DG during testing. For the purpose of this testing, the DGs must be started from standby conditions, that is, with the engine coolant and oil continuously circulated and temperature maintained consistent with manufacturer recommendations.

No changes to this page. Provided only for context/continuity.

SR 3.8.1.21

SR 3.8.1.21 is the performance of an ACTUATION LOGIC TEST for each Load Shedder and Emergency Load Sequencer train, except that the continuity check does not have to be performed, as explained in the Note. This test is performed every 31 days on a STAGGERED TEST BASIS. The Frequency is adequate based on industry operating experience, considering instrument reliability and operating history data.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 17.
2. FSAR, Chapter 8.
3. Regulatory Guide 1.9, Rev. 3, July 1993.
4. FSAR, Chapter 6.
5. FSAR, Chapter 15.
6. Regulatory Guide 1.93, Rev. 0, December 1974.
7. Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability," July 2, 1984.
8. 10 CFR 50, Appendix A, GDC 18.
9. Regulatory Guide 1.108, Rev. 1, August 1977.

(continued)

BASES

REFERENCES

10. Regulatory Guide 1.137, Rev. 0, January. 1978.

11. ASME, Boiler and Pressure Vessel Code, Section XI.

12. IEEE Standard 308-1978.

13. ULNRC-3244, dated July 25, 1995.

14. ULNRC-3342, dated February 28, 1996.

15. OL Amendment No. 112, dated August 4, 1996.

16. WCAP-15622, "Risk-Informed Evaluation of Extensions to AC Electrical Power System Completion Times."