



FPL Energy.

Duane Arnold Energy Center

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NG-08-0109
10 CFR 50.90

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

Duane Arnold Energy Center
Docket 50-331
License No. DPR-49

Technical Specification Change Request (TSCR-101): "Elimination of Emergency Diesel Generator Conditional Surveillance Requirement for Pre-planned Preventive Maintenance and Testing"

Affected Technical Specifications: Section 3.8.1

Pursuant to 10 CFR 50.90, FPL Energy Duane Arnold, LLC (FPL Energy Duane Arnold) hereby requests revision to the Technical Specifications (TS) for the Duane Arnold Energy Center (DAEC). The proposed Amendment revises the TS Actions for the Emergency Diesel Generators (EDG) to remove the conditional surveillance requirement to test the alternate EDG whenever one EDG is taken out of service for pre-planned preventive maintenance and testing.

The proposed Amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c). Associated TS Bases changes will be completed per the TS Bases Control Program (TS 5.5.10).

FPL Energy Duane Arnold requests approval of the proposed amendment by September 5, 2008. Once approved, the amendment will be implemented within 30 days. This schedule will permit the new criterion to be implemented prior to the planned maintenance on the "A" EDG.

This application has been reviewed by the DAEC Operations Review Group. A copy of this submittal, along with the 10 CFR 50.92 evaluation of "No Significant Hazards Consideration," is being forwarded to our appointed state official pursuant to 10 CFR 50.91.

This letter makes no new commitments or changes to any existing commitments.

If you have any questions or require additional information, please contact Mr. Tony Browning at (319) 851-7750.

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

Executed on February 19, 2008.



Richard L. Anderson
Vice President, Duane Arnold Energy Center
FPL Energy Duane Arnold, LLC

- Exhibits: A) EVALUATION OF PROPOSED CHANGE
B) PROPOSED TECHNICAL SPECIFICATION AND BASES CHANGES
(MARK-UP)
C) PROPOSED TECHNICAL SPECIFICATION PAGES (RE-TYPED)

cc: Administrator, Region III, USNRC
Project Manager, DAEC, USNRC
Resident Inspector, DAEC, USNRC
D. McGhee (State of Iowa)

EXHIBIT A

EVALUATION OF PROPOSED CHANGE

Subject: TSCR-101 - Elimination of Emergency Diesel Generator Conditional
Surveillance Requirement for Pre-planned Preventive Maintenance and Testing

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1. DESCRIPTION

This letter is a request to amend Operating License DPR-49 for the Duane Arnold Energy Center (DAEC). The proposed Amendment would modify the Required Actions (RA) in Limiting Condition for Operation (LCO) 3.8.1 (AC Sources – Operating) for one inoperable Emergency Diesel Generator (EDG). A new Note will be added to RA B.4, the conditional surveillance on the alternate, Operable EDG, that requires the performance of Surveillance Requirement (SR) 3.8.1.2 within 72 hours. The Note will exempt performance of this conditional surveillance when the cause of the initial inoperability of the EDG is pre-planned, preventive maintenance and testing. The exemption will not apply whenever the cause of the inoperability is corrective maintenance, even if the problem requiring corrective maintenance is discovered during the execution of the original pre-planned preventive maintenance and testing.

The existing requirement causes the Operable EDG to be made inoperable by the conditional surveillance requirement of RA B.4 whenever the preventive maintenance and testing on the alternate division EDG is not completed and returned to Operable status within 72 hours; even when it has been determined that no common mode failure potential exists within the first 24 hour period by RA B.3. This leads to the situation where both EDGs are inoperable simultaneously for the duration of the performance of SR 3.8.1.2, typically 2 hours.

FPL Energy Duane Arnold believes that this conditional surveillance requirement unnecessarily makes the plant vulnerable to a test-caused failure resulting in both EDGs being unavailable, for only a slight increase in confidence by actively demonstrating the Operability of the EDG not undergoing maintenance every 72 hours (notwithstanding the regular monthly demonstration of Operability by the performance of SR 3.8.1.2).

2. PROPOSED CHANGE

The holders of license DPR-49 for the Duane Arnold Energy Center propose to amend the Technical Specifications (TS) by deleting the referenced pages and replacing them with the enclosed new pages.

SUMMARY OF CHANGES:

TS Pages	BASES Pages
3.8-3*	B 3.8-8 B 3.8-9

* Page 3.8-4 is included due to re-pagination in the final clean typed pages.

The proposed Amendment revises RA B.4 in LCO 3.8.1 by adding a Note that exempts the performance of the conditional surveillance on the alternate, Operable EDG when the cause of the initial inoperability of the EDG is pre-planned, preventive maintenance and

testing (see Exhibit B to this letter). The current RA requires SR 3.8.1.2 to be performed on the Operable EDG once every 72 hours regardless of the cause of the initial inoperability of the alternate EDG.

Technical Specification Bases are also modified to reflect the above changes (see Exhibit B). The Bases changes are included for information only. Bases changes will be completed per the TS Bases Control Program (TS 5.5.10).

3. BACKGROUND

3.1 System Description

The DAEC EDGs provide a reliable source of emergency AC power to engineered safety features and other essential loads in the event of a Loss of Offsite Power (LOOP). The EDGs are located in the seismic Class I section of the Turbine Building and are connected to electrically separate 4160V essential buses (1A3 and 1A4). This Class I area is divided into two rooms with one EDG in each room providing physical separation. Each EDG has its own air start, fuel oil, and lubrication systems. Each EDG is cooled by separate subsystems of the Emergency Service Water (ESW) system. Thus, each EDG is both physically and electrically independent of the other.

Each EDG is capable of automatically starting and sequentially supplying the power requirements of one complete set of engineered safety features equipment for mitigating Design Basis Accidents. Each EDG can be started automatically or manually. Each diesel generator starts automatically on a safety injection signal to the corresponding Core Spray (CS) subsystem in its division (indicative of a loss-of-coolant accident (LOCA)) or upon the occurrence of an undervoltage condition on its corresponding 4160V essential bus (indicative of a LOOP). Thus, there is complete redundancy in the event of loss of one EDG.

3.2 NRC Generic Guidance

NRC Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability"

In July 1984, the NRC issued Generic Letter (GL) 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability." The purpose of GL 84-15 was to propose actions that would improve the reliability of EDGs. An example of a performance TS to support desired EDG reliability goals was provided in Enclosure 3 to the GL. This GL provided two actions associated with the condition of one inoperable EDG, which were: (1) verify correct breaker alignment and power availability of offsite power, and (2) verify the opposite train EDG starts from ambient conditions and achieves rated frequency

and voltage. The intent here was to demonstrate Operability and no common mode problems exist. According to GL 84-15, 24 hours was identified as a reasonable amount of time to perform this test to confirm that the Operable EDG was not affected by the same problem as the inoperable EDG.

NUREG-1366, "Improvements to Technical Specification Surveillance Requirements"

In May 1992, the NRC completed a comprehensive examination of TS surveillance requirements that require testing at power. This evaluation was documented in NUREG-1366, which was published in December 1992. In this guidance document, the staff recommended, "...the requirements to test the remaining diesel generator(s) when one diesel generator is inoperable due to any cause other than preplanned preventative maintenance or testing be limited to those situations where the cause of inoperability has not been conclusively demonstrated to preclude the potential for a common mode failure. However, when such testing is required, it should be performed within 8 hours of having determined that the diesel generator is inoperable."

NRC Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operations"

Based on the evaluation results that were documented in NUREG-1366, the NRC issued Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operations," dated September 27, 1993. Item 10.1 of GL 93-05 includes recommendations for TS changes associated with EDG surveillance requirements. Recommendation number 1 under Item 10.1 states, "When a EDG itself is inoperable (not including a support system or independently testable component), the other EDG should be tested only once (not every 8 hours) and within 8 hours unless the absence of any potential common mode failure can be demonstrated." Proposed TS wording acceptable to the NRC was also provided for licensees to incorporate the above recommendation into their TS as follows:

If the diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirements 4.8.1.1.2.a.5 and 4.8.1.1.2.a.6 within 8 hours, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated.

(The underlined wording was added to the Standard TS by GL 93-05.)

It should be noted that the above TS acknowledges that preplanned preventive maintenance or testing is cause to not perform the conditional surveillance of the alternate Operable EDG.

NUREG-1433, "Standard Technical Specifications – General Electric Plants (BWR/4)"

NUREG-1433, Revision 0, was formally issued on September 28, 1992 and contained the NUREG-1366 recommendations for either demonstrating that a common mode failure does not exist on the remaining EDG or testing the remaining EDG. However, the completion time for testing or demonstrating that a common mode failure does not exist on the remaining EDG was relaxed from 8 to 24 hours, consistent with the earlier GL 84-15 recommendations.

Further relaxations in EDG testing requirements were incorporated into Revision 1, published in April 1995, consistent with the GL 93-05 guidelines. Specifically, Revision 0 of NUREG-1433 had a Note in Condition B of LCO 3.8.1 (one EDG inoperable) which required that RA B.3.1 or B.3.2 for the common cause evaluation or demonstration test be completed anytime Condition B was entered, even if the inoperability were repaired within the 24 hour Completion Time. Because the common cause would no longer exist at that point, Revision 1 removed this Note and allowed the licensee's corrective action program to track the common cause evaluation on the alternate train EDG.

The above changes incorporated into Revision 1 are unchanged in both Revision 2 and current Revision 3.

3.3 DAEC Licensing Basis

DAEC adopted the above guidance from GL 93-05 as part of License Amendment 214 (Ref. 1) for not requiring the testing of an EDG solely due to the inoperability of a support system, in this case cooling water supplied by the Emergency Service Water (ESW) system. However, because the DAEC TS at that time were "custom" TS (not the NRC Standard TS), the provisions regarding common cause determinations and Operability testing of the alternate train EDG were added at the Staff's request (Ref. 2) to bring the DAEC into closer agreement with Standard TS (i.e., NUREG-1433).

Those requirements were retained as "current licensing basis (CLB)" during the DAEC's conversion to Improved Standard TS (ISTS) (Ref. 3), which was based upon NUREG-1433, Revision 1.

4. TECHNICAL ANALYSIS

The DAEC current TS (LCO 3.8.1, RA B.4) requires a conditional surveillance of the Operable EDG any time the alternate EDG is out of service for greater than 72 hours, even when RA B.3 to ensure a common cause failure does not exist between the two machines has been satisfactorily completed within the first 24 hours. Such additional testing results in unnecessary out of service time (i.e., unavailability) of the otherwise

Operable EDG. Consequently, FPL Energy Duane Arnold seeks to revise the TS criterion to be consistent with that of NRC guidance published in GL 93-05 and NUREG-1366 to minimize such unavailability and wear and tear due to testing whenever a common cause failure potential does not exist. Specifically, a Note will be added to exempt RA B.4 whenever the cause of inoperability of the alternate EDG is pre-planned preventive maintenance and testing. Use of the proposed exclusionary Note to RA B.4 will still ensure the Operable EDG meets its intended safety function in a highly reliable manner by taking credit for the satisfactory performance of its required SRs, specifically SR 3.8.1.2 and 3.8.1.3, the 31 day (i.e., monthly) start and load tests, but without introducing unnecessary testing and associated unavailability that would otherwise be needed to continue to meet the current TS RA for the conditional surveillance. That is, regular performance of these SRs is otherwise sufficient to demonstrate continued Operability of an EDG, so it should not be necessary to perform them on an accelerated basis when no common cause problem exists between an EDG and the alternate EDG which has been taken out of service for pre-planned preventive maintenance and testing.

During the performance of the conditional surveillance of RA B.4 on the otherwise Operable EDG, it, too, becomes inoperable, resulting in both EDGs being inoperable during the approximately 2 hours it takes to perform SR 3.8.1.2 and return the EDG to Operable status. While Note #3 to SR 3.8.1.2 acknowledging this dual inoperability was originally added to DAEC TS during conversion to the ITS for the purpose of avoiding a plant shutdown whenever RA B.3 or B.4 took longer than 2 hours to complete, both EDGs are inoperable nonetheless. This makes the plant vulnerable to a loss of all AC power if a random problem develops in the offsite power source (i.e., a grid disturbance beyond the DAEC switchyard), which could cause a loss of offsite power (LOOP) and could also negatively impact the EDG under test, as it attempts to connect to its essential bus due to the loss of offsite power. While the pre-planned maintenance is diligently scheduled in accordance with the Maintenance Rule requirements (10 CFR 50.65(a)(4)) to minimize this risk of losing offsite power (e.g., avoiding summer months when grid stability is most challenged), this risk cannot be completely discounted or precluded. It also makes the EDG under test vulnerable to a test-caused failure which would also make the EDG unavailable.

In conclusion, it is FPL Energy Duane Arnold's judgment that the added assurance of Operability by performing the conditional surveillance of RA B.4 beyond that normally afforded by the satisfactory performance of the regularly schedule SRs, absent a concern for a common cause problem (i.e., RA B.3 is met), does not offset the intentional unavailability of an otherwise Operable EDG and the associated potential for introducing a test-caused failure or a problem introduced by being connected parallel to offsite power by performance of this conditional surveillance. Therefore, it is deemed appropriate to exclude such conditional surveillances when the initial cause of inoperability is for pre-planned preventive maintenance and testing.

The proposed Note will not apply and the conditional surveillance of RA B.4 will still be performed every 72 hours when the cause of the alternate EDG inoperability is for

corrective maintenance to repair a problem. This is consistent with the Staff's original requirement for the conditional surveillance (Amendment 214) for ensuring EDG Operability in the alternate division EDG beyond 72 hours.

This change is also consistent with existing ISTS for BWR/4 plants (NUREG-1433, Rev. 3), as the ISTS does not require the conditional surveillance whenever the common cause failure has been excluded. The proposed Note to DAEC TS RA B.4 during pre-planned maintenance and testing is equivalent to the "OR" in the ISTS between RA B.3.1 and B.3.2.

5. REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

FPL Energy Duane Arnold, LLC 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 a conditional surveillance of the Operable EDG whenever the alternate division EDG is out of service for pre-planned preventive maintenance and testing. The EDG are not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not significantly increased.

The consequences of any accident previously evaluated are not increased, as the EDG will continue to meet its safety function to supply backup AC power as specified in the accident analysis, in a highly reliable manner, as a common cause problem between the two EDGs will have been precluded, the alternate division EDG will no longer be taken out of service for testing, and its normally scheduled surveillances will be met.

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.

No new or different accidents result from utilizing the proposed change. The changes do

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 changes do not alter assumptions made in the safety analysis for EDG performance.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

Response: No.

The proposed change eliminates a conditional surveillance of the Operable EDG whenever the alternate division EDG is out of service for pre-planned preventive maintenance and testing. The EDG will continue to meet its specified safety function in the safety analysis to provide backup AC power, in a highly reliable manner, as a common cause problem between the two EDGs will have been precluded, the alternate division EDG will no longer be taken out of service for testing, and its normally scheduled surveillances will be met.

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

CONCLUSION

Based on the preceding 10 CFR 50.92 evaluation FPL Energy Duane Arnold concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

Attorney for Licensee: Marjan Mashhadi, Esquire, Senior Attorney, FPL Energy Duane Arnold, LLC, 801 Pennsylvania Ave., NW, Suite 200 Washington, DC 20004.

5.2 Applicable Regulatory Requirements/Criteria

By letter dated February 19, 2008, FPL Energy Duane Arnold, LLC (FPL Energy Duane Arnold) submitted a request for revision of the Technical Specifications for the Duane Arnold Energy Center (DAEC). The proposed amendment modifies the Required Actions (RA) in Limiting Condition for Operation (LCO) 3.8.1 (AC Sources – Operating) for one inoperable Emergency Diesel Generator (EDG). A new Note will be added to RA B.4, the conditional surveillance on the alternate, Operable EDG that requires the performance of Surveillance Requirement (SR) 3.8.1.2 within 72 hours. The Note will exempt performance of this conditional surveillance when the cause of the initial inoperability of

the EDG is pre-planned, preventive maintenance and testing.

Evaluation:

The proposed change is consistent with the current regulations and thus, an exemption pursuant to 10 CFR 50.12 is not required. The current regulations (e.g., §50.36) do not dictate the specific actions to be taken when an EDG is inoperable; only that Limiting Conditions for Operability (LCO) are included in the TS that "... are the lowest functional capability or performance levels of equipment required for safe operation of the facility. 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." {emphasis added} The proposed change in the TS Actions for one inoperable EDG continues to demonstrate these CFR requirements, as the RA for the EDG will continue to provide the necessary remedial actions until the LCO is again met.

The DAEC Construction Permit was issued in 1970, prior to the issuance of 10 CFR 50, Appendix A, General Design Criteria (GDC); and thus, the DAEC was not specifically licensed to the GDC (Ref. SECY-92-223). The following describes the DAEC UFSAR commitment to the GDCs pertinent to this application and the impact of the requested change on those commitments.

GDCs 17 and 18 deal with the design and testing of the Electrical Power Systems for the unit, both offsite and onsite power systems. The proposed change does not affect the design of the onsite or offsite power systems, thus GDC 17 is not impacted by this change. The proposed change does involve EDG testing, which is covered by GDC 18. However, the proposed change in remedial actions does not impact the ability of the EDG to satisfy GDC 18, as the EDG is still capable of being thoroughly tested. GDC 18 does not specify the frequency or conditions requiring the conditional testing of the alternate division when one EDG is inoperable. No other changes in the design, operation or testing of the EDG are being proposed.

GDCs 37, 40, 43 and 46, all contain provisions for testing of key safety systems (other than the Electrical Power Systems), including "the performance of the full operational sequence that brings the systems into operation, including ... the transfer between normal and emergency power sources". The proposed change in EDG conditional surveillance testing does not impact this capability, as the normal EDG Surveillances, specifically SR-3.8.1.13, along with the various system simulated automatic actuation Surveillances, will continue to demonstrate that these GDCs are met.

Safety Guide 6 (i.e., original revision of Regulatory Guide 1.6) deals with the electrical independence of each division of the electrical distribution system. The proposed change to the EDG testing will not impact the design of the electrical distribution system, nor the associated interlocks between the onsite and offsite electrical distribution systems. Thus, the proposed change does not impact the DAEC's ability to meet Safety Guide 6, as

described in UFSAR Section 1.8.6.

The proposed change in EDG testing is fully consistent with that contained in the DAEC's original licensing basis - Safety Guide 9 (ref. UFSAR Section 1.8.9). Specifically, as stated in Safety Guide 9, Regulatory Position C.4:

Each diesel generator set should be capable of starting and accelerating to rated speed, in the required sequence, all the needed engineered safety feature and emergency shutdown loads.

The proposed change does not impact the capability of the EDG to perform as described above, only the requirement to demonstrate this capability as a conditional surveillance is being altered, which is not required by Safety Guide 9.

The revised RA is consistent with Improved Standard TS (NUREG-1433). The BASES for RA B.3.1 and B.3.2 to LCO 3.8.1 state:

Required Action B.3.1 provides an allowance to avoid unnecessary testing of OPERABLE DGs. 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.

Because the proposed Note to RA B.4 only applies when pre-planned preventive maintenance and testing are being conducted, the determination for no common cause has already been satisfied by RA B.3; therefore, it should not be necessary to perform SR 3.8.1.2 as a conditional surveillance every 72 hours.

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. Therefore, we have concluded that the proposed revision to the DAEC Technical Specifications is acceptable.

5.3 Precedents

To FPL Energy Duane Arnold's knowledge, no other licensee that has converted its TS to the ISTS has this requirement to perform the conditional surveillance on the EDG every 72 hours.

There are precedents for licensees with non-ISTS TS (either "custom" TS or the older STS previous to ISTS) to remove such conditional surveillance testing of EDGs, absent a determination of common cause problems with the alternate division EDG. Recent examples include the Surry plant (ADAMS Accession No.: ML050940001) and the Vermont Yankee plant (ADAMS Accession No.: ML021290606). In addition, a similar

application is pending for the Kewaunee plant (ADAMS Accession No.: ML072760572), a portion of which seeks to eliminate the conditional surveillance on EDG if common cause problems can be eliminated.

6. ENVIRONMENTAL CONSIDERATION

10 CFR Section 51.22(c)(9) identifies certain licensing and regulatory actions which are eligible for categorical exclusion from the requirement to perform an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; and (3) result in a significant increase in individual or cumulative occupational radiation exposure. FPL Energy Duane Arnold has reviewed this request and determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR Section 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows.

Basis

The change meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9) for the following reasons:

1. As demonstrated in the 10 CFR 50.92 evaluation included in this exhibit, the proposed amendment does not involve a significant hazards consideration.
2. The proposed changes do not result in an increase in power level, do not increase the production, nor alter the flow path or method of disposal of radioactive waste or byproducts. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.
3. The proposed changes do not result in changes in the level of control or methodology used for processing of radioactive effluents or handling of solid radioactive waste nor will the proposal result in any change in the normal radiation levels within the plant. There is no significant increase in individual or cumulative occupational radiation exposure.

7. REFERENCES

1. Amendment No.214 to Facility Operating License No. DPR-49 - Duane Arnold Energy Center (TAC NO. M93034), dated June 5, 1996 (ML021920156).
2. Letter, J. Franz (IES Utilities) to W. Russell (USNRC), "Request for Technical Specification Change (RTS) 285A, Emergency Diesel Generator Conditional Surveillance and Editorial Clarifications," NG-95-3413, dated December 15, 1995.
3. DAEC ISTS Conversion (TAC NO. M97197) - License Amendment # 223, dated May 22, 1998 (ML021920121).
4. NUREG-1433, Rev. 3, "Standard Technical Specifications General Electric Plants, BWR/4," June, 2004.

EXHIBIT B

PROPOSED TECHNICAL SPECIFICATION

AND

BASES CHANGES

(MARK-UP)

3 Pages to Follow

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. (continued)</p> <div data-bbox="109 525 642 709" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><u>NOTE</u> Not required to be performed when the cause of the inoperable DG is pre-planned preventive maintenance and testing.</p> </div>	<p>B.3 Determine OPERABLE DG is not inoperable due to common cause failure.</p> <p><u>AND</u></p> <p>B.4 Perform SR 3.8.1.2 for OPERABLE DG.</p> <p><u>AND</u></p> <p>B.5 Restore DG to OPERABLE status.</p>	<p>24 hours</p> <p>Once per 72 hours</p> <p>7 days</p> <p><u>AND</u></p> <p>8 days from discovery of failure to meet LCO expect for Condition A</p>
<p>C. Two offsite circuits inoperable.</p>	<p>C.1 Declare required feature(s) inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p> <p>C.2 Restore one offsite circuit to OPERABLE status.</p>	<p>12 hours from discovery of Condition C concurrent with inoperability of redundant required feature(s)</p> <p>24 hours</p> <p><u>AND</u></p> <p>8 days from discovery of failure to meet LCO except for Condition A</p>

(continued)

BASES

ACTIONS

B.2 (continued)

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 component 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, reasonable time for repairs, and low probability of a DBA occurring during this period.

B.3

Required Action B.3 requires that the cause of the inoperability be evaluated to ensure a common cause failure does not exist that could render the OPERABLE DG inoperable. This evaluation may be performed by analysis or inspection or by demonstration of OPERABILITY. If the cause of inoperability exists on the other DG, it is declared inoperable upon discovery, and Condition D of LCO 3.8.1 is entered. Once the failure is repaired, and the common cause failure no longer exists, Required Action B.3 is satisfied. If the cause of the initial inoperable DG cannot be confirmed not to exist on the remaining DG, SR 3.8.1.2 can be performed within the same Completion Time as Required Action B.3 to provide assurance of continued OPERABILITY of the remaining DG.

Conversely, Required Action B.3 may be satisfied by a simple review when the cause of the initial inoperability is pre-planned preventive maintenance and testing. In this case, there is no potential for a common cause failure, as no failure has occurred. At any point during the pre-planned maintenance or testing, if any new failure is detected, the common cause evaluation must be re-performed on the Operable DG. If the 24-hour Completion Time for Required Action B.3 has expired at the point of discovery of the failure requiring corrective maintenance, Condition E must be entered until the common cause evaluation or SR 3.8.1.2 is performed.

In the event the inoperable DG is restored to OPERABLE status prior to completing B.3, 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 a reasonable time to confirm that the OPERABLE DG is not affected by the same problem as the inoperable DG.

(continued)

BASES

ACTIONS
(continued)

B.4

Required Action B.4 is modified by a Note that removes this requirement when the cause of the initial inoperability is pre-planned preventive maintenance and testing. In this case, no actual failure has occurred (i.e., a potential for a common mode failure has not been identified) and the likelihood of the other DG having an undetected failure during this period is very low. At any point during the pre-planned maintenance, if any new failure requiring corrective maintenance is detected, Required Action B.4 must be entered for the Operable DG. If the 72 hour Completion Time has expired at the point of discovery of the failure requiring corrective maintenance, then Condition E must be entered until SR 3.8.1.2 is performed.

To ensure the continued OPERABILITY of the remaining DG during the 7 day Completion Time of Required Action B.5, SR 3.8.1.2 must be performed once per 72 hours for the OPERABLE DG. The 72 hour Completion Time is acceptable since it has already been determined that a common cause failure does not exist.

B.5

In Condition B, the remaining OPERABLE DG and offsite circuit(s) are adequate to supply electrical power to the onsite Class 1E Distribution System. The 7 day Completion Time takes into account the capacity and capability of the remaining AC sources, reasonable time for repairs, and low probability of a DBA occurring during this period.

The second Completion Time for Required Action B.5 establishes a limit based on the maximum time allowed for the combination of one DG and two offsite AC power sources to be inoperable during any single contiguous occurrence of failing to meet the LCO except for Action A. If Condition B is entered while, for instance, two offsite circuits are inoperable and one circuit is subsequently restored OPERABLE, the LCO may already have been not met for up to 24 hours. This situation could lead to a total of 8 days, since initial failure of the LCO (except for Condition A), to restore the DG. At this time, the second offsite circuit could again become inoperable, the DG restored OPERABLE, and an additional 24 hours (for a total of 9 days) allowed prior to complete restoration of the LCO (except for Condition A). The 8 day Completion Time provides a limit on the time allowed in a specified condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which Conditions B and C are entered concurrently, and when corrective actions are completed prior to completing the shutdown required by LCO 3.0.3 (which is required to be entered by Action F). The "AND" connector between the 7 day and 8 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive must be met.

(continued)

EXHIBIT C

PROPOSED TECHNICAL SPECIFICATION PAGES

(RE-TYPED)

2 Pages to Follow

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2 Restore one offsite circuit to OPERABLE status.	24 hours <u>AND</u> 8 days from discovery of failure to meet LCO except for Condition A
D. Two DGs inoperable.	D.1 Restore one DG to OPERABLE status.	2 hours
E. Required Action and Associated Completion Time of Condition A, B, C, or D not met.	E.1 Be in MODE 3. <u>AND</u> E.2 Be in MODE 4.	12 hours 36 hours
F. Three or more AC sources inoperable.	F.1 Enter LCO 3.0.3.	Immediately