



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20565

SUPPLEMENTAL SAFETY EVALUATION BY THE OFFICE OF

NUCLEAR REACTOR REGULATION

STATION BLACKOUT EVALUATION

TOLEDO EDISON COMPANY

CENTERIOR SERVICE COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-346

1.0 INTRODUCTION

The NRC staff's Safety Evaluation (SE) pertaining to the licensee's initial responses to the Station Blackout (SBO) Rule, 10 CFR 50.63, was transmitted to the licensee by letter dated March 7, 1991. The staff found that the Davis-Besse Nuclear Power Station, Unit No. 1, will conform with the SBO rule after completing the modifications committed to in its submittals. In addition, the SE contained six recommendations that the licensee was to evaluate, although the evaluations did not have to be submitted to the NRC. By letter dated February 20, 1992, the NRC staff changed its position and requested submittal of the licensee's evaluations of the NRC staff recommendations. The licensee responded by letter from D. C. Shelton, Toledo Edison (TE), to the Document Control Desk, U.S. Nuclear Regulatory Commission, dated March 31, 1992.

2.0 EVALUATION

The licensee's responses to each of the staff recommendations are evaluated below:

2.1 Proposed AAC Power Source (SE Section 2.2.2)

SE Recommendation: The capacity (KWs) of the proposed AAC power source (diesel generator) should have approximately the same capacity (KWs) as one of the existing EDGs. If the proposed AAC power source has less capacity, then the licensee should perform a coping analysis which shows that the plant can cope with and recover from a Station Blackout (SBO) for the required duration. Such an analysis should be included in the documentation supporting the SBO submittals that is to be maintained by the licensee.

Licensee Response: In the response, the licensee stated that the capacity of the Station Blackout Diesel Generator (SBODG) is 2865 kW. The capacity of each existing Emergency Diesel Generator (EDG) is 2600 kW. Since the SBODG capacity is larger than the capacity of the EDGs, no coping analysis is necessary.

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Staff Evaluation: The staff agrees with the licensee that no coping analysis is necessary since the capacity of the SBODG (2865 kW) is greater than EDG (2600 kW). The staff finds that SE issue regarding the capacity of SBODG resolved.

2.2 Class 1E Battery Capacity (SE Section 2.3.2)

SE Recommendation: The licensee should ensure that the battery charger associated with the battery supplying SBO loads is powered from the AAC power source during the SBO.

Licensee Response: In the response, the licensee stated that the battery chargers required to supply loads during an SBO are powered from essential 4160V bus D1. Bus D1 will be powered by the SBODG through non-essential 4160V bus D2 in the event of an SBO.

Staff Evaluation: Based on its review, the staff finds this SE issue resolved.

2.3 Compressed Air (SE Section 2.3.3)

SE Recommendation: The licensee should ensure that the emergency instrument air compressor is powered from the proposed AAC power source or show that compressed air is not required during an SBO event.

Licensee Response: In the response, the licensee stated that the emergency instrument air compressor is powered from 480V bus F7, which is fed from 4160V bus D2. Bus D2 is the electrical bus that is fed by the SBODG. Thus, the emergency instrument air compressor can be powered by the SBODG during an SBO, if needed.

Staff Evaluation: Based on its review, the staff finds this SE issue resolved.

2.4 Proposed Modifications (SE Section 2.5)

SE Recommendation: The licensee should include a full description, including the nature and objectives of all modifications necessary for compliance with 10 CFR 50.63 in the documentation supporting the SBO submittals that is to be maintained by the licensee.

Licensee Response: In the response, the licensee stated that the only modification required for SBO Rule (10 CFR 50.63) compliance is the installation of the SBODG as described in TE's letter of April 17, 1989, (Serial Number 1651). The SBODG has been installed and is currently undergoing pre-operational testing. Pre-operation testing will be completed prior to completion of the eighth refueling outage, currently scheduled for the spring of 1993.

Documentation supporting this modification is maintained by TE in accordance with the existing Quality Assurance Program.

Staff Evaluation: Based on its review, the staff finds this SE issue resolved.

2.5 Quality Assurance (QA) and Technical Specification (SE Section 2.6)

SE Recommendation: The licensee should verify that the SBO equipment is covered by an appropriate QA program consistent with the guidance of Regulatory Guide 1.155. Further, this evaluation should be documented as part of the package supporting the SBO Rule response.

Licensee Response: In the response, the licensee stated that the SBODG and associated components have been incorporated into TE's existing Quality Assurance Program. The equipment directly needed to ensure operation of the SBODG was purchased as non-safety related and has been classified as Augmented Quality (AQ). The quality requirements applied during the manufacture, installation, and testing are defined by Regulatory Guide 1.155, Appendix A.

Staff Evaluation: Based on its review, the staff finds this SE issue resolved.

2.6 EDG Reliability Program (SE Section 2.7)

SE Recommendation: The licensee should implement an EDG reliability program which meets the guidance of Regulatory Guide 1.155, Section 1.2. If an EDG reliability program currently exists, the program should be evaluated and adjusted in accordance with Regulatory Guide 1.155. Confirmation that such a program is in place or will be implemented should be included in the documentation supporting the SBO submittals that is to be maintained by the licensee.

Licensee Response: In the response, the licensee stated that an EDG reliability program in accordance with NUMARC 87-00, Appendix D, has been implemented at Davis-Besse, Unit 1. This program meets the intent of the guidance of regulatory Guide 1.155, Section 1.2.

Staff Evaluation: The staff accepts the licensee's statement and finds this SE issue regarding EDG Reliability Program resolved.

3.0 SUMMARY AND CONCLUSION

The NRC staff's Safety Evaluation (SE) pertaining to the licensee's initial response to the Station Blackout (SBO) Rule, 10 CFR 50.63, was transmitted to the licensee by letter dated March 7, 1991. The staff found that Davis-Besse will conform with the SBO rule after completing the modifications committed to in its submittals. In addition, the licensee's responses to each of the staff's recommendations have been evaluated in this Supplemental Safety Evaluation and found to be acceptable.

Principal Contributor: A. N. Pal

Date: July 1, 1992