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May 19, 1995

2CAN059501

U. S. Nuclear Regulatory Commission
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Washington, DC 20555

Subject: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Technical Specification Change Request Regarding Emergency Diesel Generator Allowed Outage Time Extension

Gentlemen:

Attached for your review and approval is a proposed Arkansas Nuclear One-Unit 2 (ANO-2) Technical Specification amendment revising specification 3.8.1.1 extending the Emergency Diesel Generator allowed outage time (AOT) from 72 hours to seven days, with an additional once-per-refueling cycle 10 day AOT for maintenance purposes. This amendment is a collaborative effort of participating Combustion Engineering Owners Group members based on an integrated review and assessment of plant operations, deterministic and design basis considerations and plant risk.

The proposed change has been evaluated in accordance with 10CFR50.91(a)(1) using criteria in 10CFR50.92(c) and it has been determined that this change involves no significant hazards considerations. The bases for these determinations are included in the attached submittal.

Entergy Operations requests that the effective date for this change be within 30 days of NRC issuance of the amendment to allow for distribution and procedural revisions necessary to implement this change. Although this request is neither exigent nor emergency, your prompt review is requested.

A001

Very truly yours,

JW Yelverton

JWY/lgm
Attachments

To the best of my knowledge and belief, the statements contained in this submittal are true.

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for Johnson **County and the State of Arkansas, this** 19 **day of** May, **1995.**

Juana M. Tapp
Notary Public
My Commission Expires 11-8-2000

OFFICIAL SEAL
JUANA M. TAPP
NOTARY PUBLIC - ARKANSAS
JOHNSON COUNTY
My Commission Expires: 11 - 8 - 2000

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ATTACHMENT

TO

2CAN059501

PROPOSED TECHNICAL SPECIFICATION

AND

RESPECTIVE SAFETY ANALYSES

IN THE MATTER OF AMENDING

LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT TWO

DOCKET NO. 50-368

DESCRIPTION OF PROPOSED CHANGES

- Extend the allowed outage time (AOT) for an inoperable emergency diesel generator (EDG) from the existing limit of 72 hours to seven days.

- Add a once-per-refueling cycle 10 day AOT for the purposes of either corrective maintenance or preventative maintenance.

- Make a minor administrative change in ACTION e, to change "a" to "at."

BACKGROUND

Arkansas Nuclear One-Unit 2 (ANO-2) is equipped with two seismically qualified, class 1E, diesel engine driven generators which supply backup electrical power to the 4160 volt (V) vital AC busses. Each engine is designed to automatically start and tie-on to its respective 4160V engineered safety features (ESF) bus in the event of a bus undervoltage condition on either the 4160V bus or its associated 480V motor control center. The EDGs also receive an auto start command on a safety injection actuation signal, but will not load unless a bus undervoltage condition exists.

Each EDG is designed to start automatically upon receipt of a start demand, attain rated speed and voltage within 15 seconds, and sequentially accept ESF loads. Each EDG is sized to accommodate loads up to all anticipated ESF actuated equipment with a continuous load rating of 2850 kilowatts (kW) and a 7-day rating of 3250 kW. Under procedurally controlled conditions, the EDGs may be aligned to supply the adjacent ESF bus via cross-tie breakers or backfeed the non-class 1E 4160V feeder bus to power select non-ESF loads.

The EDGs are designed for manual operation from either the local control panel or the control room operating panel. This provision allows operation for surveillance testing and manual start and load operations as well as local operations in an event which renders the control room inaccessible.

The EDGs are described in chapter 8.3.1.1.7 of the ANO-2 Safety Analysis Report.

DISCUSSION OF CHANGE

The current ANO-2 technical specification (TS) 3.8.1.1 requires that should an EDG be determined to be inoperable for any reason, the EDG be restored to an operable status within 72 hours or place the plant in at least hot standby within the following six hours and in cold shutdown within the following 30 hours. The proposed TS amendment would allow up to seven days to restore operability to an EDG and makes provisions for a once-per-refueling cycle allowance for a ten day AOT for a single EDG for the purpose of performing corrective or preventative maintenance necessary to restore operability or improve reliability.

The desire to perform select corrective and preventative maintenance on-line is based on a number of expected enhancements to the maintenance process. Some examples are:

- Allow for increased flexibility in the scheduling and performance of preventative maintenance.

- Reduction in the number of individual entries into limiting conditions for operation action statements by providing sufficient time to perform related maintenance tasks within a single entry.

- Allow better control of resource allocation. During outage maintenance windows, plant personnel and resources are spread across a large number and wide variety of maintenance tasks. Allowing on-line maintenance gives the plant the flexibility to focus more quality resources on any required or elected EDG maintenance.

- Avert unplanned plant shutdown and minimize potential for requests for notice of enforcement discretion. Risks incurred by unexpected plant shutdowns can be comparable to and often exceed those associated with continued power operation.

- Improve EDG availability during shutdown modes.

The Combustion Engineering Owners Group (CEOG) "Joint Applications Report for Emergency Diesel Generators AOT Extension," CE NPSD-996, has explored and evaluated the various risk contributors associated with the proposed AOT extensions. This evaluation includes a consideration of the risk associated with "at power", "transition" and "shutdown" operations.

The evaluation of "at power risk" change resulting from the extended EDG AOT was performed using plant specific information from each of the participating CEOG members. The resultant increase in "at power" risk for ANO-2 was determined to be approximately 7%. This change in risk, when compared with the quantitative screening criteria provided by EPRI "Draft PSA Applications Guide" (Revision H), falls into the "non-risk significant" region of acceptability. Additionally, the final proposed average core damage frequency is well within the NRC safety goal as defined by SECY-91-270, "Interim Guidance on Staff Implementation of the Commission's Safety Goal Policy." The acceptability of the proposed amendment, while falling within existing guidelines for acceptable changes in risk, is further justified by evaluating the risk benefit associated with avoided "transition risk" and "shutdown risk."

Transition risk represents the risk associated with reducing power and going to hot or cold shutdown. This risk is of interest in understanding the tradeoff between shutting down the plant and restoring EDG operability while the plant continues operation. The results of this risk assessment indicate that performing a seven day EDG corrective maintenance activity "at power" would be risk beneficial.

Shutdown risk is an assessment of the risk associated with removing an EDG from service while the plant is in a shutdown mode of operation. The results of this risk assessment indicate that performing corrective or preventative maintenance at power would be risk neutral when compared with early outage maintenance and result in a slight increase in risk when compared with late outage maintenance.

The CEOG report also performed an assessment of the proposed change on large early release scenarios. The assessment of the three classes of events considered for these scenarios concluded that increased unavailability of one EDG will result in a negligible impact on the large early release probability for ANO.

The conclusion of the CEOG report on EDG AOT extension to seven days with a once per cycle ten day AOT was that the small at power risk increase associated with this change is acceptable. When this acceptable risk increase is offset by avoided transition risk and shutdown risk, the result is a negligible change in overall plant risk.

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

An evaluation of the proposed change has been performed in accordance with 10CFR50.91(a)(1) regarding no significant hazards considerations using the standards in 10CFR50.92(c). A discussion of these standards as they relate to this amendment request follows:

Criterion 1 - Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.

The emergency diesel generators (EDGs) are backup alternating current power sources designed to power essential safety systems in the event of a loss of offsite power. EDGs are not an accident initiator in any accident previously evaluated. Therefore, this change does not involve an increase in the probability of an accident previously evaluated.

The EDGs provide backup power to components that mitigate the consequences of accidents. The proposed changes to allowed outage times (AOTs) do not affect any of the assumptions used in deterministic safety analysis.

In order to fully evaluate the EDG AOT extension, probabilistic safety analysis methods were utilized. The results of these analyses indicate no significant increase in the consequences of an accident previously evaluated. These analyses are detailed in CE NPSD-996, Combustion Engineering Owners Group "Joint Applications Report for Emergency Diesel Generators AOT Extension."

Therefore, this change does not involve a significant increase in the probability or consequences of any accident previously evaluated.

Criterion 2 - Does Not Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated.

This proposed change does not alter the design, configuration, or method of operation of the plant. Therefore, this change does not create the possibility of a new or different kind of accident from any previously evaluated.

Criterion 3 - Does Not Involve a Significant Reduction in the Margin of Safety.

The proposed changes do not affect the technical specification limiting conditions for operation or their bases which support the deterministic analyses used to establish the margin of safety. Evaluations used to support the requested technical specification changes have been demonstrated to be either risk neutral or risk beneficial. These evaluations are detailed in CE NPSD-996.

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

Therefore, based upon the reasoning presented above and the previous discussion of the amendment request, Entergy Operations has determined that the requested change does not involve a significant hazards consideration.

PROPOSED TECHNICAL SPECIFICATION CHANGES