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 50-287 Oconee Nuclear Station, Unit 3, Duke Power Co.

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AUTH. NAME: PARKER, W.O. AUTHOR AFFILIATION: Duke Power Co.
 RECIP. NAME: DENTON, H.R. RECIPIENT AFFILIATION: Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards response to 810601 ltr describing several deficiencies in areas identified in NUREG-0737, but not addressed in "Abnormal Transient Operating Guidelines (ATOG) Program Description." Guidelines & diagrams encl. *SB8 R28*

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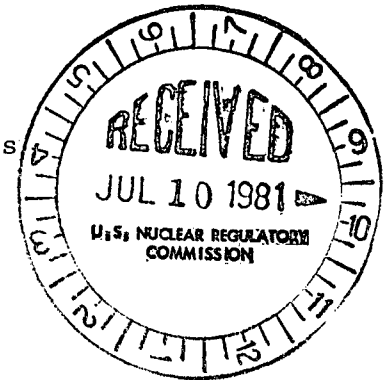
July 6, 1981

TELEPHONE: AREA 704
373-4083

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: T. M. Novak, Assistant Director for Operating Reactors
Division of Licensing

Re: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287



Dear Sir:

This letter is in response to your letter dated June 1, 1981 which describes several deficiencies in areas that were identified in NUREG-0737, but not addressed by the Arkansas Nuclear One, Unit One Abnormal Transient Operator Guidelines (ATOG) submittal.

Based on the nature of the request, it appears that the Staff presently reviewing ATOG is not aware of the fundamental aspects of the ATOG program that had been discussed with Staff personnel as early as August 1979, and of the submittals of supporting information that had been made in early 1980. Therefore, prior to providing the responses to the Staff's identified deficiencies, a brief discussion of the history of the B & W Owners Group operator guideline effort will be provided.

Attachment 1 provides a listing of the key events that occurred between the NRC Staff and the B & W Owners regarding the ATOG program. Initially, the B & W Owners decided to pursue an operator guideline development program that was much broader in scope than what the Staff had initially required in NUREG-0578. This proposed program was discussed several times with the Staff during 1979. The concept included development of plant specific operator guidelines that provide initial response to a postulated event that is based on fundamental indications. Thus, rather than the guidelines being event-oriented, they are symptom-oriented. In order to develop the final guidelines, event-oriented reviews were performed. Transients which had a relatively high likelihood of occurring--loss of feedwater, loss of offsite power, and overcooling--were reviewed as were those that could occur and cause severe consequences: small steam leak, and tube rupture. It was determined in the beginning that operator guidelines based on all FSAR analyzed transients would be of marginal benefit. The B & W Owners wanted to provide the operators with guidance that would provide significant benefit.

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Mr. Harold R. Denton, Director
July 6, 1981
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The broad categories of transients selected for guideline preparation were overcooling, undercooling, and loss of reactor coolant inventory. For simplicity, it was initially assumed that all transients began with a reactor trip. However, the ATWS event is in fact addressed by the guidelines, and this postulated accident will be discussed later in this letter.

Because the guidelines were to be developed on a plant specific basis, rather than generic to an NSSS design, significant amounts of plant specific data, including drawing, procedures, setpoints, were collected and put into format of Safety Sequence Diagrams and System Auxiliary Diagrams. This information was then used as input to plant specific event trees and finally into plant specific operator guidelines. As noted in Attachment 1, these documents for the lead B & W Owner plant, ANO-1, were provided to the Staff in April 1980 and placed on the Oconee dockets by letter dated April 24, 1980. Attachments 2, 3, and 4 of this letter provide one set of the Oconee specific SSDs, SADs and event trees for Staff review. These have been previously reviewed by Duke Power and approved for use. The Duke letter of April 3, 1981 previously provided the Oconee 3 draft operator guidelines for Staff review. These draft guidelines are currently undergoing review within Duke Power, and final guidelines are expected this fall with final implementation intended during the summer of 1982. Response to the specific items identified by the Staff are provided in Attachment 5. A complete ATOG program description is provided as Attachment 6.

The ATOG program was initiated by the B & W Owners and was intended to be of significantly more benefit to the operators than the NRC initially required. The NRC Staff apparently fails to realize that the guidelines are symptom-oriented rather than event-oriented. Had the Staff realistically reviewed the guidelines, it would have been obvious that multiple failure events, which are likely to occur, are covered by ATOG. The addressing of low likelihood events was not within the original intent of the program but, as can be seen by a close review of the guidelines, they are implicitly covered when the symptomatic approach is used. This is one task in which the B & W Owners realized that significant benefit could be achieved by investing the necessary resources and undertook this operator guideline development program without regulatory pressure. The Staff has expressed concerns about the program well after it was initiated.

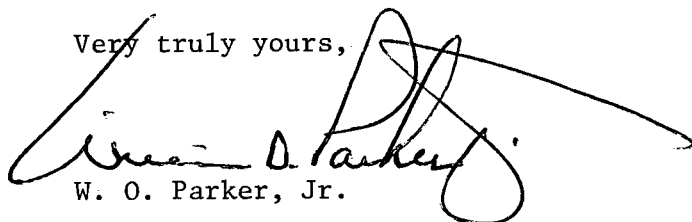
Considerable effort has been expended thus far in preparing the guidelines, which are nearly ready to be finalized and subsequently implemented by summer 1982. As such, it is not considered that any significant Staff changes could be implemented during the process of initial implementation. It is, therefore, suggested that the Staff close out NUREG-0737, Item I.C.1 with the present guidelines and that any unresolved long-term items be handled under I.C.9, long-term program plan for upgrading of procedures.

Mr. Harold R. Denton, Director

July 6, 1981

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Very truly yours,

A handwritten signature in black ink, appearing to read "W. O. Parker, Jr.", with a large, sweeping flourish extending to the right.

W. O. Parker, Jr.

RLG/php

Attachments

DUKE POWER
OCONEE NUCLEAR STATION

Attachment 1

Abnormal Transient Operator Guideline Program

- 07/79 NUREG-0578 issued; item 2.1.9 requires analysis of design and off-normal transients and accidents.
- 08/09/79 B&W Owners present to NRC Staff (Ross, Novak, Capra, et al) plan to address NUREG-0578, item 2.1.9 (NRC Meeting Summary dated 08/24/79)
- 09/13/79 B&W Owners provided an update on the status of the ATOG program development to NRC Staff (Novak, Capra, et al; NRC meeting summary dated 09/21/79)
- 10/15/79 (Lynchburg, Virginia) B&W provided overview of total program to staff representatives (Thadani, Novak, Mahan) in order to support extended schedule for completion.
- 10/19/79 B&W Owners discussion with NRC of lead plant (ANO) event trees SSD's, and anticipated analysis.
- 11/07/79 AP&L letter providing narrative description of ATOG program technique; explanation of SSD's and SAD's; and excessive feed-water SSD.
- 11/09/79 Duke letter submittal of documents addressing inadequate core cooling and small-break LOCA.
- 01/31/80 Duke letter submitting additional guidelines related to inadequate core cooling.
- 02/22/80 B&W Owners provide status report of the ATOG program to NRC Staff (Novak, Israel, Rosztoczy, Wilson, et al)

04/16/80 B&W letter to Tom Novak, NRC, submitted 3 copies of each of the ANO, Unit 1 SSD's, SAD's, and event trees.

04/24/80 Duke letter references B&W submittal on behalf of Owners Group on the Oconee dockets.

08/21/80 B&W Owners provide status update of ATOG program to NRC Staff (Throm, Sheron, Beckman, et al)

12/16/80 B&W Owners provide status update of ATOG program to NRC Staff.

01/02/81 Duke letter references draft ANO-1 ATOG guidelines as being representative of Oconee guidelines in preparation.

04/03/81 Duke letter submits four copies of the Oconee Unit 3 draft ATOG guidelines.

06/01/81 NRC request for additional information.

DUKE POWER COMPANY
OCONEE NUCLEAR STATION

Attachment 2

Abnormal Transient Operator Guideline Program

Safety Sequence Diagrams (SSD's)

Excessive Feedwater	EDS - 0114 - 011 - 011
Small Steam Line Break	EDS - 0114 - 011 - 012
Steam Generator Tube Rupture	EDS - 0114 - 011 - 007
Loss Offsite AC Power	EDS - 0114 - 011 - 003
Loss of Feedwater	EDS - 0114 - 011 - 002

Safety Sequence Diagrams and System Auxiliary Diagrams, Guideline, Rev. 4