

APRIL 9 1982

Dockets Nos. 50-269, 50-270
and 50-287

Mr. William O. Parker, Jr.
Vice President - Steam Production
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Parker:

Our consultant, Franklin Research Center, has reviewed your May 7, 1980 response to IE Bulletin 80-04, "Analysis of a PWR Main Steam Line Break with Continued Feedwater Addition." As a result of this review some concerns have been raised. In order for us to resolve these concerns, we request that you respond to the enclosed Request for Additional Information within 45 days of your receipt of this letter.

Since this reporting requirement relates solely to the Oconee Nuclear Station, fewer than ten respondents are affected; therefore, OMB clearance is not required under P.L. 96-511.

If you have any questions, please contact your NRC Project Manager.

Sincerely,

APPROVED AND FORWARDED BY
JOHN F. STOLZ

John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosure:
Request for Additional
Information

cc w/enclosure:
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Duke Power Company

cc w/enclosure(s):

Mr. William L. Porter
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Office of Intergovernmental Relations
116 West Jones Street
Raleigh, North Carolina 27603

Oconee County Library
501 West Southbroad Street
Walhalla, South Carolina 29691

Honorable James M. Phinney
County Supervisor of Oconee County
Walhalla, South Carolina 29621

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Regional Radiation Representative
EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

William T. Orders
Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Route 2, Box 610
Seneca, South Carolina 29678

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 220, 7910 Woodmont Avenue
Bethesda, Maryland 20814

Manager, LIS
NUS Corporation
2536 Countryside Boulevard
Clearwater, Florida 33515

J. Michael McGarry, III, Esq.
DeBevoise & Liberman
1200 17th Street, N.W.
Washington, D. C. 20036

REQUEST FOR ADDITIONAL INFORMATION

**PWR MAIN STEAM LINE BREAK WITH
CONTINUED FEEDWATER ADDITION**

DUKE POWER COMPANY

OCONEE NUCLEAR STATION UNITS 1, 2, AND 3

NRC DOCKET NO. 50-269, 50-270, 50-287

FRC PROJECT C5506

NRC TAC NO. 46847, 46848, 46849

FRC ASSIGNMENT 5

NRC CONTRACT NO. NRC-03-81-130

FRC TASK 134

Prepared by

Franklin Research Center
20th and Race Street
Philadelphia, PA 19103

Author: F. Vosbury

FRC Group Leader: R. C. Herrick

Prepared for

Nuclear Regulatory Commission
Washington, D.C. 20555

Lead NRC Engineer: P. Hearn

March 15, 1982



Franklin Research Center

A Division of The Franklin Institute

The Benjamin Franklin Parkway, Phila., Pa. 19103 (215) 448-1000

BACKGROUND

Evaluation of the information contained in the May 7, 1980 [1] letter from the Duke Power Company (DPC) to the U.S. Nuclear Regulatory Commission (NRC) relating to IE Bulletin 80-04, Analysis of a PWR Main Steam Line Break with Continued Feedwater Addition, revealed an item of concern. Additional information relating to this concern is needed before a final evaluation can be made regarding the potential for exceeding containment design pressure.

This concern and the additional information needed to resolve this concern are identified in this Request for Additional Information.

ITEM

CONCERN

IE Bulletin 80-04 directs the Licensee to review containment pressure response to a main steam line break (MSLB) accident to determine the impact of runout flow from the auxiliary feedwater (AFW) system and other energy sources.

In explaining their response to the MSLB accident at the Oconee Nuclear Station Units 1, 2, and 3, DPC stated:

"Following the main steam line break, the [Integrated Control System] ICS was assumed to close the main and startup feedwater control valves after the reactor trip. No operator action to isolate the affected OTSG was assumed. Following the initial blowdown of the affected steam generator, the main feedwater flow was assumed to be supplied to the affected steam generator at a rate sufficient to maintain the design two foot level."

DPC concluded that, even though runout AFW flow was not specifically considered in the FSAR analysis, the assumptions bound the situation involving AFW flow.

DPC also stated that:

"It is to be noted that continued feedwater addition either by means of the main feedwater system or the auxiliary feedwater system in an

uncontrolled manner could ultimately result in overpressurization of the containment. The Oconee Nuclear Station emergency procedure includes the requirement to isolate all feedwater into the affected steam generator."

DPC's response is not sufficient to allow FRC to complete the evaluation of the potential for exceeding containment design pressure.

Since the ICS is not safety-grade, the system cannot be relied upon to function correctly in an accident. Failure of the ICS may cause both MFW and AFW runout flow to the affected steam generator, which, as stated in Reference 1, could ultimately result in overpressurization of the containment.

As stated in Reference 1, the Oconee Nuclear Station procedures require that the operator isolate the MFW and AFW systems to prevent containment overpressure in the event that a single active failure causes runout feedwater flow. However, the Licensee does not state the time margin that the operator has before the actions must be completed.

REQUEST

Please provide the following information concerning your analysis of containment pressure response to a MSLB with continued feedwater addition:

1. An evaluation of the potential for exceeding containment design pressure using the MFW and AFW runout flow rates.
2. Provide the time after the start of a MSLB that containment design pressure will be exceeded if no operator action is taken to terminate the accident. Provide the magnitude of the peak pressure and the time at which the peak occurs.
3. Provide actions required to be performed by the operator to prevent exceeding containment design pressure, and provide justification for the time at which credit is taken for operator action.

REFERENCE

1. W. O. Parker, Jr. (DPC)
Letter to J. P. O'Reilly (NRC)
Subject: Response to IE Bulletin 80-04
May 7, 1980