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CONTROL NO: **3919**

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| FROM: Duke Power Co. Charlotte, N.C. A.C. Thies | | | DATE OF DOC 4-8-75 | DATE REC'D 4-10-75 | LTR XX | TWX | RPT | OTHER |
| TO: Norman C. Moseley | | | ORIG 1 Signed | CC | OTHER | SENT AEC PDR <u>XXX</u> SENT LOCAL PDR <u>XXX</u> | | |
| CLASS | UNCLASS XXX | PROP INFO | INPUT | NO CYS REC'D 1 | DOCKET NO: 50-270 | | | |

DESCRIPTION:
Ltr. trans the following.....

PLANT NAME: Ocone #2

ENCLOSURES:
Abnorm Occurr. # 75-8, on 3-22-75 concern-
ing Power level raised above cutoff prior to
establishing equilibrium xenon conditions.....

(1 cy. rec'd)

ACKNOWLEDGED DO NOT REMOVE

FOR ACTION/INFORMATION

VCR 4-10-75

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| 1 - ASLB | NEWMARK/BLUME/AGBABIAN | 1 - AGMED (RUTH GUSSMAN) Rm B-127 GT |
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Sheppard

DUKE POWER COMPANY

Regulatory

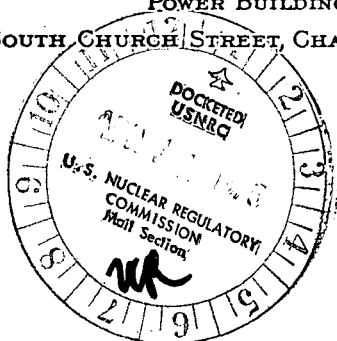
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POWER BUILDING

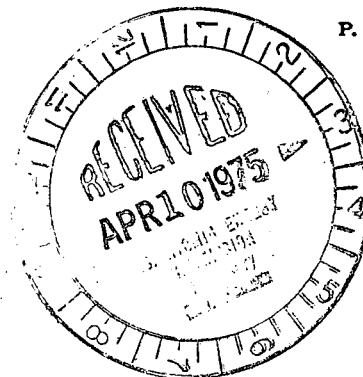
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28201

A. C. THIES
SENIOR VICE PRESIDENT
PRODUCTION AND TRANSMISSION

April 8, 1975



P. O. Box 2178



Mr. Norman C. Moseley, Director
U. S. Nuclear Regulatory Commission
Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303

Re: Oconee Unit 2
Docket No. 50-270

Dear Mr. Moseley:

Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station
Technical Specifications, please find attached Abnormal Occurrence
Report AO-270/75-8.

Very truly yours,

A. C. Thies

ACT:vr
Attachment

cc: Mr. Angelo Giambusso

DUKE POWER COMPANY
OCONEE UNIT 2

Report No.: AO-270/75-8

Report Date: April 8, 1975

Occurrence Date: March 22, 1975

Facility: Oconee Unit 2, Seneca, South Carolina

Identification of Occurrence: Power level raised above cutoff prior to establishing equilibrium xenon conditions

Conditions Prior to Occurrence: Unit at 80 percent full power

Description of Occurrence:

At 1320, March 22, 1975, a calculation was made to determine the time that Oconee Unit 2 xenon reactivity would be within 10 percent of the value for operation at steady-state rated power. (This condition is required by Technical Specification 3.5.2.5.d prior to escalating power above the power level cutoff - 82.5% FP for Oconee Unit 2.) The results of that calculation indicated that the required condition of xenon reactivity would be satisfied at 1830 on March 22, 1975. Power escalation to 89% FP was then initiated at 1840, March 22, 1975 based upon the results of the 1320 calculation.

At 0430, March 23, 1975, it was determined that the power level had been escalated above the power level cutoff without meeting the criteria of Technical Specification 3.5.2.5.d.

Designation of Apparent Cause of Occurrence:

The results of the 1320 calculation (March 22, 1975) were incorrectly interpreted in that they reference 80% FP rather than 100% FP as required. That is, the time that xenon would be within specification limits was based upon 90 percent of the 80% FP equilibrium value rather than upon 90 percent of the 100% FP equilibrium value. The extrapolated time that the core would reach 90 percent of the 80% FP equilibrium xenon value was 1830, March 22, 1975, and the calculation was so marked.

Another calculation was obtained at 1740 on March 22, 1975 by a second individual. This calculation was interpreted correctly and indicated 0300, March 23, 1975 as the time that the required conditions would be met. However, this information did not reach the control operator, but the value of 100 percent equilibrium xenon at 100% FP, 2.642% $\Delta k/k$, was given to the control operator.

Control room personnel correctly calculated 2.367% $\Delta k/k$ xenon reactivity for the 10 percent of equilibrium requirement from the 2.642% $\Delta k/k$ rated

power xenon worth supplied from the second calculation. When referencing the 1320 printout, the Assistant Control Operator, Control Operator and the Assistant Shift Supervisor misread the value of 2.2380% $\Delta k/k$ for xenon worth at 1830 hours as 2.380% $\Delta k/k$. This agreed with the required 2.378% $\Delta k/k$ value, which control room personnel had calculated, and the time, 1830, was in agreement with the previously (erroneously) predicted time for xenon to be within the required value. Power was then escalated.

The apparent cause of this occurrence was the misinterpretation, of the initial calculation, thereby predicting an incorrect time for the 10 percent of equilibrium xenon condition. The second cause was the misreading of the value of xenon reactivity.

Analysis of Occurrence:

Reactor power was increased above the power level cutoff, 82.5 percent, when xenon worth was only 86.7 percent of the full power equilibrium value rather than the required 90 percent or greater. The xenon requirement was not met for approximately nine hours of operation during which the maximum reactor power was 89 percent. The purpose of this restriction is to assure that power peaks, which might occur in the unlikely event of a loss-of-coolant accident, are limited to an acceptable value. Other factors, such as power tilt and power imbalance were well within normal limitations, and the fact that the unit power only reached 89 percent full power would have served to limit these power peaks. Proper unit operation was not affected by this incident nor were the health and safety of the public affected.

Corrective Action:

In order to prevent future occurrences of this incident, the following corrective actions will be implemented by April 15, 1975:

1. Operations personnel have been made cognizant of the consequences of erroneous readings of data concerning xenon worth.
2. Performance personnel have been instructed to assure understanding of xenon calculations.
3. Training of operations personnel will be conducted by presenting examples of xenon transients.
4. The Operations Group will determine the acceptable xenon reactivity level for escalation above the power level cutoff and this value will be recorded in the shift supervisors log.