REPORTABLE/ABNORMAL OCCURRENCES/INCIDENTS (LICENSING)

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FILE: INCIDENT FILE

FROM	DATE OF DOC	DATE REC'D	LTR	TWX	RPT	OTHER
Duke Power Co. Charlotte, N.C. William O. Parker, Jr.	1-27-76	2-4-76	XXX			

TO:	ORIG	CC	OTHER	SENT NRC PDR	SENT LOCAL PDR
Norman C. Moseley	1 Signed			XXX	XXX

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXX			1	50-269

DESCRIPTION:

Ltr. trans the following....

ENCLOSURES:

Reportable Occurrence # 76-1, on 1-10-76 regarding Reactor operation exceeded the error adjusted reactor power imbalance limit.....

ACKNOWLEDGED
(1 cy. Encl. rec'd)
DO NOT REMOVE

PLANT NAME: Oconee # 1

FOR ACTION/INFORMATION VCR 2-9-76

BRANCH CHIEF Purple

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Regulatory Docket

DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

January 27, 1976

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

Re: Oconee Unit 1
Docket No. 50-269

Dear Mr. Moseley:

Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station Technical Specifications, please find attached Reportable Occurrence Report RO-269/76-1.

Very truly yours,

William O. Parker Jr.

William O. Parker, Jr. by WAH

MST:mmb

Attachment

CC Director, Office of Management Information
and Program Control

1090

DUKE POWER COMPANY

OCONEE UNIT 1

Report No.: RO-269/76-1

Report Date: January 27, 1976

Occurrence Date: January 10, 1976

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Occurrence: Reactor operation exceeded the error adjusted reactor power imbalance limit.

Conditions Prior to Occurrence: Unit at 65 percent full power.

Description of Occurrence:

On January 10, 1976 at approximately 1900 hours, Oconee Unit 1 reactor power was being escalated from 65 to 90 percent full power. During the power increase it was observed that the reactor power imbalance was slowly increasing. At approximately 2000 hours, the positive reactor imbalance approached the limit specified on the periodic instrument surveillance graph, but had not reached the Technical Specification limit specified by Technical Specification Figure 3.5.2.3A. Action was taken to restore imbalance to normal; however, imbalance remained in the area bounded by the periodic instrument surveillance graph and the Technical Specification limit until 2400 hours January 10, 1976.

The limit specified on the periodic instrument surveillance graph was established to take into account the existance of statistical and instrument errors which need to be considered to assure that the Technical Specification limit on reactor power imbalance is not exceeded. At the time of the incident, operating personnel were under the impression that these error adjusted curves were to be used as a guide to prevent exceeding the Technical Specification curves. During review of these events on January 12, 1976, it was realized that exceeding the error adjusted limits could possibly have resulted in exceeding the limits as specified by Technical Specification 3.5.2.6.

Designation of Apparent Cause of Occurrence:

The apparent cause of this occurrence was a misunderstanding as to the intended use of the periodic instrument surveillance graph in that the error adjusted limit must be observed in order to assure operation within the Technical Specification limits. Contributing to this cause was the lack of satisfactory explanation and marking in the periodic instrument surveillance procedure.

Analysis of Occurrence:

Technical Specification Figure 3.5.2.3A provides a limit for reactor power imbalance versus reactor power level to prevent achievement of the maximum linear heat rate (due to local power peaking) so that maximum clad temperature will not exceed the limits given in Appendix K to 10 CFR 50 in the event of a postulated loss of coolant accident. The existance of statistical and instrument errors associated with the measurement of reactor power imbalance makes it necessary to operate within an error adjusted power imbalance envelope in order to assure that the Technical Specification limit is not actually being exceeded. In this incident, the reactor was operated for three hours and 45 minutes outside the error adjusted power imbalance limits, and, therefore, it is possible that the limits specified in Technical Specification Figure 3.5.2.3A were exceeded.

However, the Bases for Technical Specification 3.5 states that all of the power distribution parameters (quadrant tilt, rod position limits and imbalance) must be at their limits while simultaneously all other engineering and uncertainty factors are also at their limits to produce the maximum allowable heat rate. In this incident, the maximum occurring quadrant tilt was 1.08% as compared with either the operating limit of 4% or the absolute limit of 9% permitted by Technical Specifications 3.5.2.4a and 3.5.2.4c respectively. Also, the rod position limits were never approached by less than 17% withdrawn. For these reasons, it is concluded that the health and safety of the public was not affected by this incident.

Corrective Action:

In order to prevent recurrence, each shift supervisor has been instructed to regard the error adjusted reactor power imbalance curve as a Technical Specification limit. In addition, a change has been made to the affected periodic instrument surveillance procedure explaining the curves and how they should be used, and the curves have been marked as being Technical Specification limits.