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U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NUMBER

50-269/270/287

## NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO:

Mr. Edson G. Case

FROM:

Duke Power Company  
Charlotte, North Carolina  
William O. Parker, Jr.

DATE OF DOCUMENT

1/3/78

DATE RECEIVED

1/6/78

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DESCRIPTION

ENCLOSURE

License Nos. DPR-39, DPR-47 and DPR-55  
Appl for Amend: tech specs proposed change  
concerning computer software currently  
used to process the incore detector signal..  
..notorized 1/3/78.....

PLANT NAME: Oconee Units 1-2-3  
RJL 1/6/78

(2-P)

(1-P)+(2-P)

40 ENCL

SAFETY

FOR ACTION/INFORMATION

BRANCH CHIEF: (7)

SCHWENCER

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780060167

## 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 3, 1978

Mr. Edson G. Case, Acting Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555



Re: Oconee Units 1, 2, and 3  
Docket Nos. 50-269, -270, -287

Dear Mr. Case:

Recently an error has been identified in the computer software currently used to process the incore detector signal, as reported in RO-269/77-27. The error pertained to the application of the background correction on the incore detector signal. The existing software obtains the background corrected signal after the raw signal has been corrected for detector depletion whereas the correct formulation should have been to apply the background correction on the raw signal and then to apply the detector depletion correction. The incorrect application of the background correction could cause a negative bias in the core axial imbalance measured by the incore detector system when the incore system contains a large number of detectors with significant detector depletion. Based on the number and amount of depletion of old detectors in Oconee 1, 2, and 3, it has been determined that the incorrect application of the background correction in the plant computer software could cause the full incore system measured positive imbalance values to be underestimated by .2%, 2.5%, and 2.5% for Oconee 1, 2, and 3, respectively, at the present time.

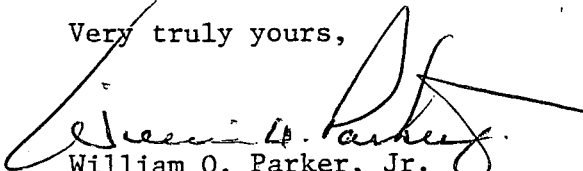
An evaluation of the impact of this incident on applicable Technical Specification limits has been made, and it has been determined that in the case of Oconee 1 the RPS and LOCA imbalance limits and in the case of Oconee 2 and 3 the LOCA imbalance limits have been determined to have adequate margin to offset the effects of the bias in the positive imbalance. For Units 2 and 3 it has been determined that the RPS positive trip setpoints (Technical Specification Figures 2.3-2 B and C) should be reduced by 2.5% to provide the necessary conservatism. The positive imbalance trip setpoints in Units 2 and 3 have been reduced appropriately, and these reduced setpoints would have to be maintained until the plant

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Mr. Edson G. Case  
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computer software is corrected for the proper background signal processing. Therefore, a revision of the Oconee Nuclear Station Technical Specifications is proposed herein pursuant to 10CFR §50.90. The attached proposed revision includes the modified power-imbalance trip setpoints for Oconee 2 and 3 (Technical Specification Figures 2.3-2 B and C) in order to account for the bias in the positive imbalance measured by the current incore detector system.

Very truly yours,



William O. Parker, Jr.

PMA:vr

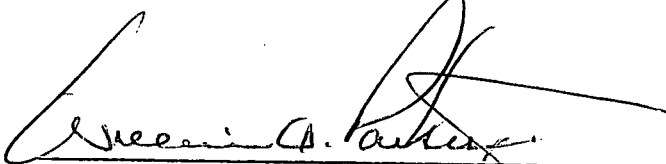
Attachment

Mr. Edson G. Case

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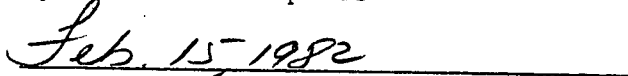
WILLIAM O. PARKER, JR., being duly sworn, states that he is Vice President of Duke Power Company; that he is authorized on the part of said Company to sign and file with the Nuclear Regulatory Commission this request for amendment of the Oconee Nuclear Station Facility Operating Licenses DPR-38, DPR-47, and DPR-55; and that all statements and matters set forth therein are true and correct to the best of his knowledge.

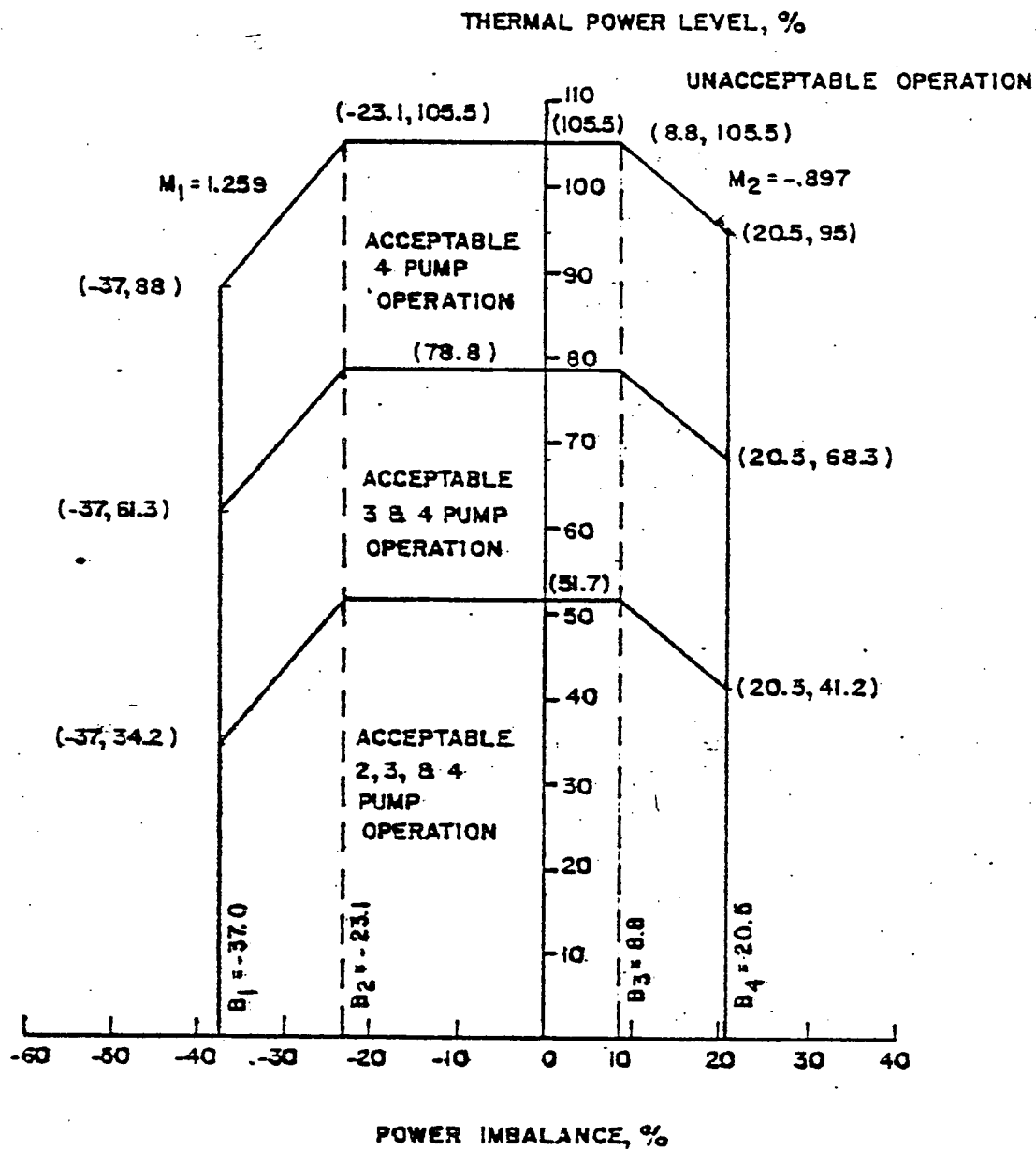
  
William O. Parker, Jr., Vice President

Subscribed and sworn to before me this 3rd day of January, 1978.

  
Notary Public

My Commission Expires:



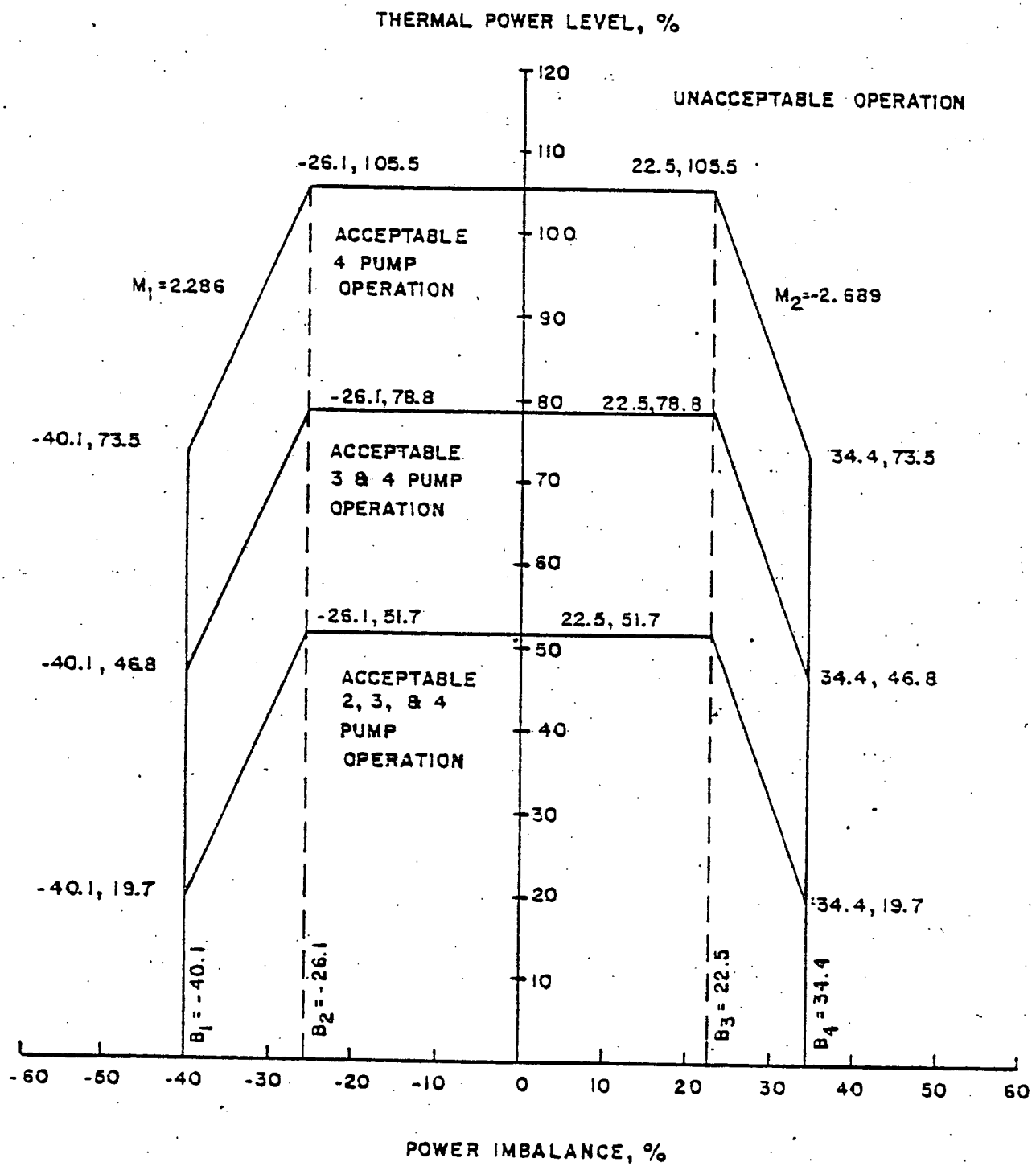


PROTECTIVE SYSTEM MAXIMUM  
ALLOWABLE SETPOINTS  
UNIT 2



OCONEE NUCLEAR STATION

Figure 2.3-2B



PROTECTIVE SYSTEM MAXIMUM  
ALLOWABLE SETPOINTS  
UNIT 3

2.3-10



OCONEE NUCLEAR STATION

Figure 2.3-2C

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