DUKE POWER COMPANY
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85 FEB 4 P12:59

January 28, 1985

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Re: Catawba Nuclear Station, Unit 1
Docket No. 50-413

Dear Mr. O'Reilly:

Pursuant to Technical Specification 3.1.1.3, Action Statement a.3, please find attached a Special Report concerning the Moderator Temperature Coefficient being more positive than 0 $\Delta k/k/°F$.

Very truly yours,

Hal B. Tucker

RWO:mjf

Attachment

cc: Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC Resident Inspector
Catawba Nuclear Station

Palmetto Alliance
2135½ Devine Street
Columbia, South Carolina 29205

Mr. Jesse L. Riley
Carolina Environmental Study Group
854 Henley Place
Charlotte, North Carolina 28207

Robert Guild, Esq.
P. O. Box 12097
Charleston, South Carolina 29412

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DUKE POWER COMPANY

CATAWBA NUCLEAR STATION

SPECIAL REPORT

During Zero Power Physics Testing on Unit 1 Cycle 1, the all rod withdrawn isothermal temperature coefficient was measured as -1.75 pcm/°F. This corresponds to a Moderator Temperature Coefficient (MTC) of -0.02 pcm/°F (assuming a -1.73 pcm/°F vendor predicted Doppler Coefficient). Technical Specification 3.1.1.3 requires the MTC to be less than zero. Because of measurement uncertainties, Duke Power Company feels it pertinent to establish interim control rod withdrawal limits pursuant to Technical Specification 3.1.1.3 Action Statement a.1 for all Mode 1 or 2 operation not covered by Special Test Exception 3.10.3. These rod withdrawal limits are based on maintaining a negative MTC at all times.

These limits will be placed in appropriate operating procedures and will remain in effect until such time that sufficient reactor poisons have built up to preclude a positive MTC. We expect this to occur at approximately 3500 MWD/MTU (≅ 85 EFPD) at Hot Zero Power, All Rods Out, Xenon free conditions.

Since the attached rod withdrawal limits will ensure a negative MTC during power operation, the health and safety of the public are not affected.

OP/1/A/6700/01

UNIT ONE DATA BOOK

CURVE 1.2.1

TEMPORARY CONTROL ROD

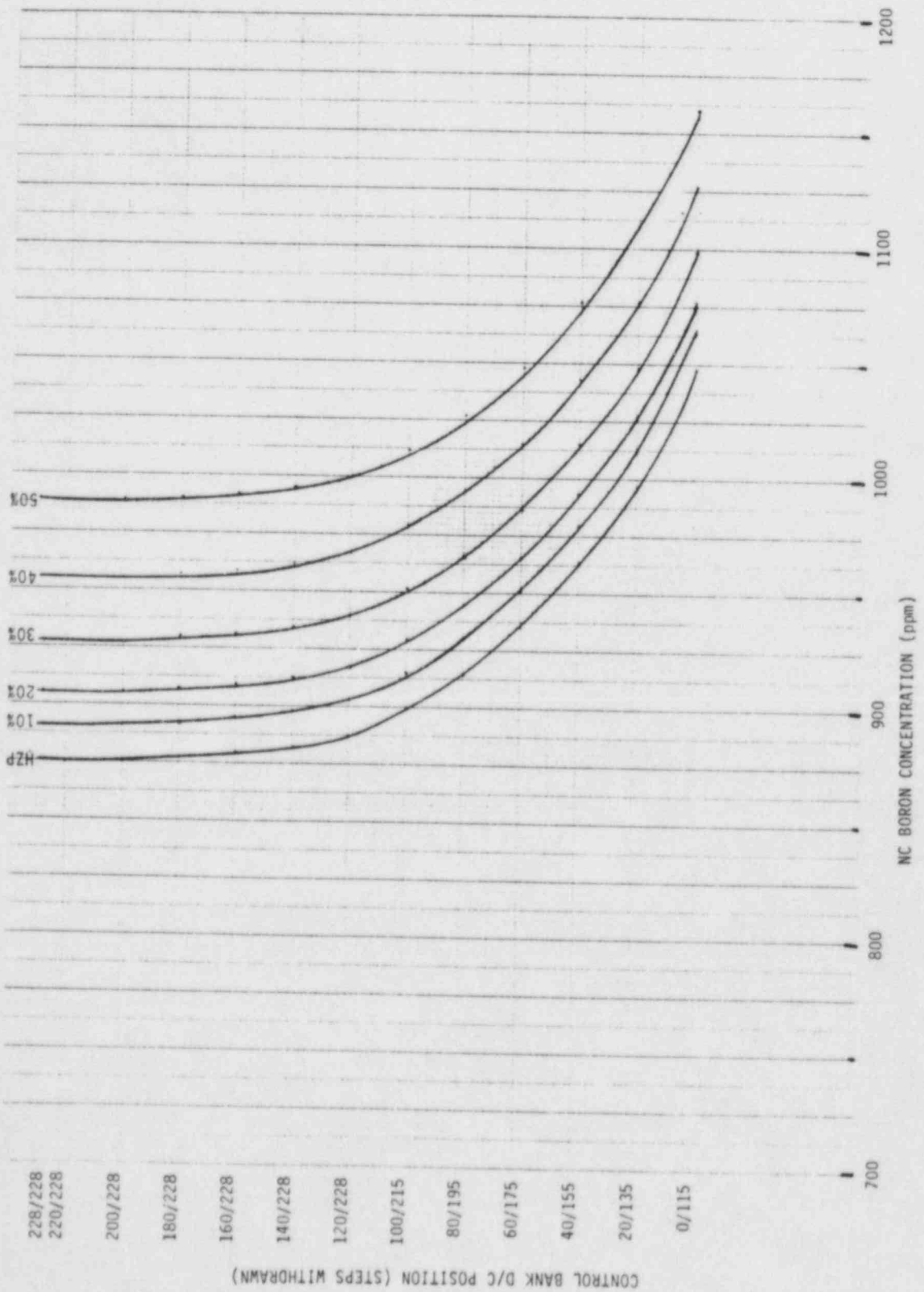
WITHDRAWAL LIMITS

SOURCE PT/1/A/4150/20

PREPARED BY C.B. Thiele

APPROVED BY

EFFECTIVE DATE



NOTE: Acceptable operation below each curve ensures the MTC<0 pcm/°F