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L-2006-247  
10 CFR 50.36

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Re: Turkey Point Unit 4  
Docket No. 50-251  
Core Operating Limits Report

In accordance with Technical Specification 6.9.1.7, the attached Core Operating Limits Report is provided for Turkey Point Unit 4. These curves are applicable for Unit 4 Cycle 23.

Should there be any questions, please contact James Connolly, Licensing Manager, at 305-246-6632.

Very truly yours,

Terry O. Jones  
Site Vice President  
Turkey Point Nuclear Plant

OIH

Attachment

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

ADDI

**CORE OPERATING LIMITS REPORT - UNIT 4 CYCLE 23**

The Technical Specifications (TS) affected by this report are:

- 3.1.3.2 Analog Rod Position Indication System
- 3.1.3.6 Control Rod Insertion Limits
- 3.2.1 Axial Flux Difference (AFD)
- 3.2.2 Heat Flux Hot Channel Factor -  $F_Q(Z)$
- 3.2.3 Nuclear Enthalpy Rise Hot Channel Factor -  $F_{\Delta H}$

The Control Rod Insertion Limits, AFD,  $F_Q(Z)$ ,  $K(Z)$ , and  $F_{\Delta H}$  have been developed using the NRC approved methodology specified in TS 6.9.1.7.

**TS 3.1.3.2 Analog Rod Position Indication System**

The All Rods Out position for all Shutdown Banks and Control Banks is defined to be 230 steps withdrawn.

**TS 3.1.3.6 Control Rod Insertion Limits**

The control rod banks shall be limited in physical insertion as shown on Figure 1 for All Rods Out = 230 steps withdrawn.

**TS 3.2.1 Axial Flux Difference**

The AFD limits are provided on Figure 2.

**TS 3.2.2 Heat Flux Hot Channel Factor -  $F_Q(Z)$**

$$[F_Q]^L = 2.50$$

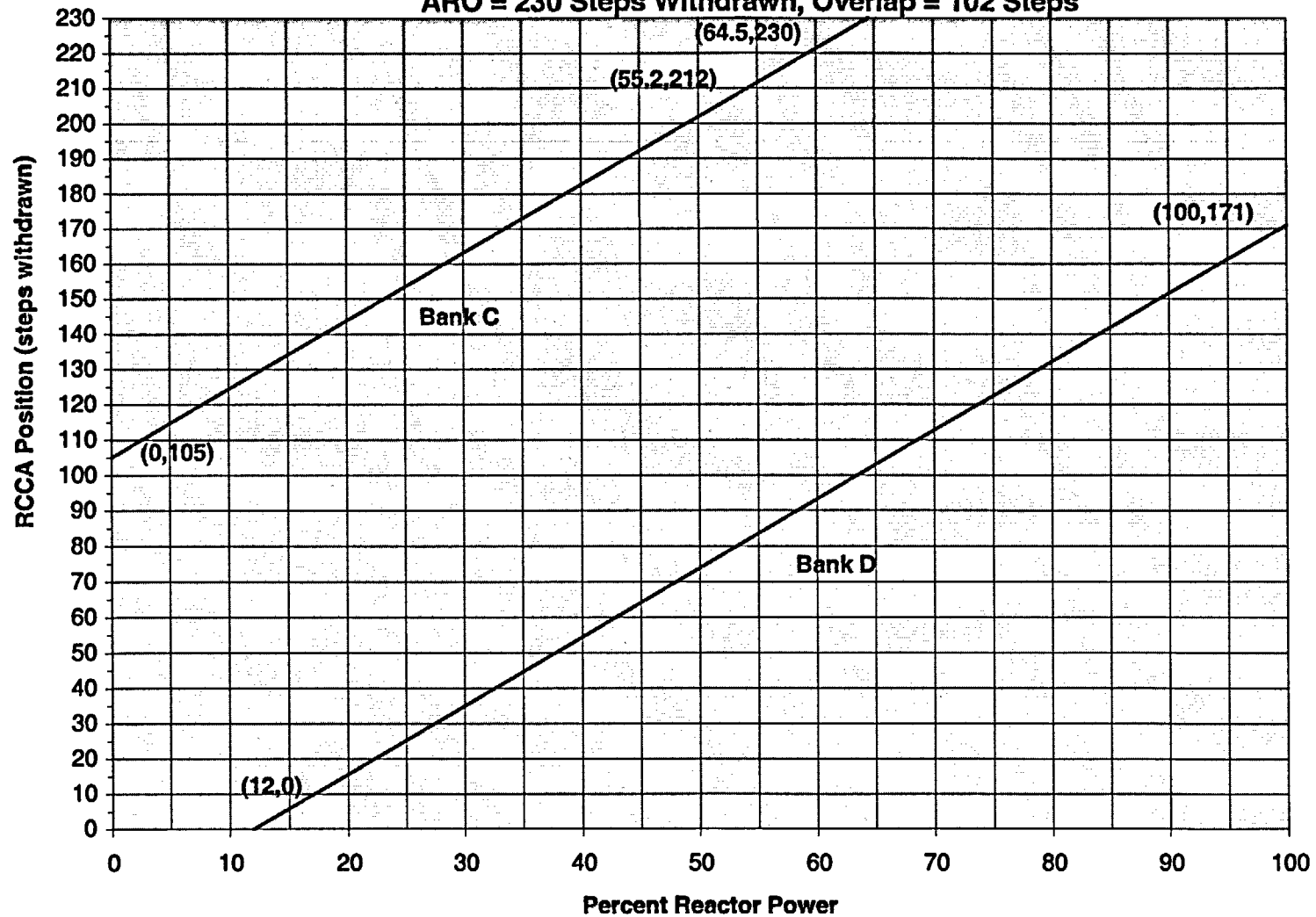
$K(Z) = 1.0$  for  $0 \text{ ft.} \leq Z \leq 12 \text{ ft.}$  where  $Z$  = core height.

**TS 3.2.3 Nuclear Enthalpy Rise Hot Channel Factor**

$$F_{\Delta H}^{RTP} = 1.70$$

$$PF_{\Delta H} = 0.3$$

**Figure 1**  
**Turkey Point Unit 4 - Cycle 23 Rod Insertion Limits vs Thermal Power**  
**ARO = 230 Steps Withdrawn, Overlap = 102 Steps**



**Figure 2**  
**Axial Flux Difference as a Function of Rated Thermal Power**  
**Turkey Point Unit 4 - Cycle 23**

