



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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MEMORANDUM FOR: R. Wayne Houston, Assistant Director  
for Reactor Safety  
Division of Systems Integration

FROM: Brian W. Sheron, Chief  
Reactor Systems Branch  
Division of Systems Integration

SUBJECT: GRAND GULF UNIT 1 TECHNICAL SPECIFICATIONS

Reactor Systems Branch has reviewed the Grand Gulf Technical Specifications revised through Amendment 12. Enclosure 1 lists the sections which we reviewed. Enclosure 2 provides our comments.

*Brian W. Sheron*

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Enclosures:  
As stated

cc: D. Hoffman  
RSB Section B Members  
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## ENCLOSURE 1

### TECHNICAL SPECIFICATIONS, BASES AND DEFINITIONS REVIEWED BY THE REACTOR SYSTEMS BRANCH FOR GRAND GULF UNIT 1

#### I. Definition

- 1.3 Average Planar Linear Heat Generation Rate
- 1.8 Critical Power Ratio
- 1.12 Emergency Core Cooling System (ECCS) Response Time
- 1.13 End-of-Cycle Recirculation Pump Trip System Response Time
- 1.21 Linear Heat Generation Rate
- 1.24 Minimum Critical Power Ratio

#### II. Safety Limits and Limiting Safety System Settings

- 2.1.1 Thermal Power, Low Pressure or Low Flow
- 2.1.2 Thermal Power, High Pressure and High Flow
- 2.1.3 Reactor Coolant System Pressure
- 2.1.4 Reactor Vessel Water Level
- 2.2.1 Reactor Protection System Instrumentation Setpoints

#### III. Limiting Conditions for Operation and Surveillance Requirements

- 3/4.2.1 ~~AVERAGE PLANAR LINEAR HEAT GENERATION RATE~~
- 3/4.2.2 APRM Setpoints
- 3/4.2.3 Minimum Critical Power Ratio
- 3/4.3.1 Reactor Protection System Instrumentation
- 3/4.3.2 Isolation Actuation Instrumentation
- 3/4.3.3 Emergency Core Cooling System Actuation Instrumentation
- 3/4.3.4 Recirculation Pump Trip Actuation Instrumentation/ATWS  
Recirculation Pump Trip System Instrumentation
- 3/4.3.5 Reactor Core Isolation Cooling System Actuation  
Instrumentation
- 3/4.3.7.4 Remote Shutdown Monitoring Instrumentation
- 3/4.3.7.5 Accident Monitoring Instrumentation
- 3/4.3.8 Plant Systems Actuation Instrumentation
- 3/4.4.1 Recirculation System
- 3/4.4.2 Safety Valves
- 3/4.4.6.2 Reactor Steam Dome
- 3/4.4.7 Main Steam Isolation Valves
- 3/4.4.9 Residual Heat Removal
- 3/4.5 Emergency Core Cooling System
- 3/4.7.3 Reactor Core Isolation Cooling System
- 3/4.9.8 Refueling Operations; Water Level - Reactor Vessel
- 3/4.9.11 Refueling Operation; Residual Heat Removal and Coolant  
Circulation
- 3/4.10.4 Special Test Exceptions; Recirculation Loops
- 5.4 ~~REACTOR COOLANT SYSTEM~~

#### IV. Bases

Bases for all the areas identified in Sections II and III above.

## ENCLOSURE 2

### COMMENTS ON GRAND GULF UNIT 1 TECHNICAL SPECIFICATIONS

1) 2.2.1 Reactor Protection System Instrumentation Setpoints

Table 2.2.1-1 Item 3, "Reactor Vessel Steam Dome Pressure-High;" The allowable value should be less than or equal to 1045 psig (Reference page 5-5 of the SER).

2) Bases 2.1.2 Thermal Power, High Pressure and High Flow

The last paragraph of the text lists a GE report number as NEDO-203040. The correct report number is NEDO-20340.

3) 3.4.2.2 APRM Setpoints

The time constant for the thermal power monitor needs to be included in the LCO's and surveillance requirements. (Reference page 15-4 of Grand Gulf SER).

4) 3/4.3.3 Emergency Core Cooling System Actuation Instrumentation

1. Table 3.3.3-2 item B.2.e "LPCI Pump B and C Discharge Pressure - High" should have the same allowable value as item A.2.f "LPCI Pump A Discharge Pressure - High" which is 115-135 psig, increasing.

2. Table 3.3.3-3 "Emergency Core Cooling System Response Times" gives the LPCI A & B Pump response time as  $\leq 45$  seconds. Table 6.3-1 of the FSAR states that LPCI rated flow is achieved in  $< 40$  seconds for the DBA analysis. The specification should be changed to read  $\leq 40$  seconds.