

NPL 98-0766  
Attachment 4

EDITED TECHNICAL SPECIFICATION PAGES  
TECHNICAL SPECIFICATION CHANGE REQUEST 207  
LIMITING CONDITIONS FOR OPERATION  
UNDERVOLTAGE REACTOR TRIP  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

9810130225 981007  
PDR ADOCK 05000266  
P PDR

2) Cold Shutdown

The reactor is in the cold shutdown condition when the reactor has a shutdown margin of at least 1 percent  $\Delta k/k$  and reactor coolant temperature is  $\leq 200^\circ\text{F}$ .

3) Refueling Shutdown

The reactor is in the refueling shutdown condition when the reactor is subcritical by at least 5 percent  $\Delta k/k$  and  $T_{avg}$  is  $\leq 140^\circ\text{F}$ . A refueling shutdown refers to a shutdown to move fuel to and from the reactor core.

4) Shutdown Margin

Shutdown margin is the instantaneous amount of reactivity by which the reactor core would be subcritical if all withdrawn control rods were tripped into the core but the highest worth withdrawn RCCA remains fully withdrawn. If the reactor is shut down from a power condition, the hot shutdown temperature should be assumed. In other cases, no change in temperature should be assumed.

h. Power Operation

The reactor is in power operating condition when the reactor is critical and the average neutron flux of the power range instrumentation indicates greater than 2 percent of rated power.

i. Refueling Operation

Refueling operation is any operation involving movement of core components (those that could affect the reactivity of the core) within the containment when the vessel head is removed.

j. Rated Power


Rated power is here defined as a steady state reactor core output of 1518.5 MWT.\*

k. Thermal Power

Thermal power is defined as the total core heat transferred from the fuel to the coolant.

~~\* For Unit 2: If the Reactor Coolant System raw measured total flow rate is <174,000 gpm but  $\geq$ 169,500 gpm, Unit 2 shall be limited to  $\leq$ 98% rated power.~~

TABLE 15.3.5-2(continued)

	1 TOTAL NO. OF CHANNELS	2 NO. OF CHANNELS TO TRIP	3 MINIMUM OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	OPERATOR ACTION IF CONDITIONS OF COLUMN 3 CANNOT BE MET
1. <u>FUNCTIONAL UNIT</u> Hi Pressurizer Water Level	3	2	2**		Be in hot shutdown in 8 hours
. Low Reactor Coolant System Flow					
a. Low Flow in One Loop (>50% full power)	3/loop	2/loop (any loop)	2/loop**		Be in hot shutdown in 8 hours
b. Low Flow in Both Loops (10-50% full power)	3/loop	2/loop (both loops)	2/loop**		Be in hot shutdown in 8 hours
. Turbine Trips					
a. Turbine Autostop Oil Pressure	3	2	2**		Be <50% of rated power within 4 hours
b. Turbine Stop Valve Position	2	2	2**		Be <50% of rated power within 4 hours
. Steam Flow-Feedwater Flow Mismatch	2/loop	1/loop	1/loop		Be in hot shutdown in 8 hours
. Lo Lo Steam Generator Water Level (input to reactor trip)	3/loop	2/loop	2/loop**		Be in hot shutdown in 8 hours
. 4KV Bus (A01 and A02)					
a. Undervoltage (input to reactor trip)	2/each bus	1/each bus	1/each bus		Be in hot shutdown in 8 hours
b. Underfrequency	2/each bus	1/each bus	1/each bus		Be in hot shutdown in 8 hours