ATTACHMENT 1
CLARIFICATION SURVEILLANCE REQUIREMENT
TECHNICAL SPECIFICATION CHANGE
FOR REACTOR PROTECTION / ESF INSTRUMENTATION

TABLE 4.1-1 (Continued)

MINIMUM FREQUENCIES FOR CHECK, CALIBRATIONS, AND TEST OF INSTRUMENT CHANNELS

	Channel Description	Check	Calibrate	Test	Remarks
39.	Steam/Feedwater Flow and Low S/G Water Level	S	R	M	
40.	Intake Canal Low (See Footnote 1)	D	R	M(1), Q(2)	1) Logic Test 2) Channel Electronics Test
41.	Turbine Trip and Feedwater Isolation				
	a. Steam generator water level high	S	R	M	
	b. Automatic actuation logic and actuation relay	N.A.	R	M(1)	1) Automatic actuation logic only, actuation relays tested each refueling
42.	Reactor Trip System Interlocks				
	a. Intermediate range neutron flux, P-6	N.A.	R(3)	M(4)	3) Neutron detectors may be excluded from the calibration
	b. Low power reactor trips block, P-7	N.A.	R(3)	M(4)	4) With power greater than or equal to the interlock setpoint, the required test shall consist of verifying that the interlock is in the required state by observing the permissive annunciator window
	c. Power range neutron flux, P-8	N.A.	R(3)	M(4)	
	d. Power range neutron flux, P-10	N.A.	R(3)	M(4)	
	e. Turbine impulse pressure	N.A.	R	R	

Footnote 1:

Check — Consists of verifying for an indicated intake canal level greater than 23'-6" that all four low level sensor channel alarms are not in an alarm state.

Calibration — Consists of uncovering the level sensor and measuring the time response and voltage signals for the immersed and dry conditions. It also verifies proper action of instrument channel from sensor to electronics to channel output relays and annunciator. Only the two available sensors on the shutdown unit would be tested.

Tests
1) The logic test verifies the three out of four logic development for each train by using the channel test switches for that train.
2) Channel electronics test verifies that electronics module responds properly to a superimposed differential millivolt signal which is equivalent to the sensor detecting a "dry" condition.