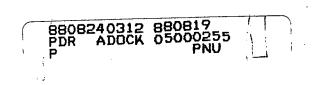ATTACHMENT

Consumers Power Company
Palisades Plant
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TECHNICAL SPECIFICATIONS PAGE CHANGES

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4 Pages

Table 3.17.4 (Cont'd)

No	Functional Unit	Minimum Operable Channels	Minimum Degree of Redundancy	Permissible Bypass Conditions	
8.	Pressurizer Wide Range Water Level Indication	2 (1, p, q)	None	Not required in Cold or Refueling Shutdown	/ / /
9.	Pressurizer Code Safety Relief Valves Position Indication (Acoustic Monitor or Temperature Indication)	1 per Valve	None	Not Required below 325°F	
10.	Power Operated Relief Valves (Acoustic Monitor or Temperature Indication)	1 per Valve	None	Not required when PORV isolation valve is closed and its indication system is operable	
11.	PORV Isolation Valves Position Indication	1 per Valve	None	Not required when reactor is depressurized and vented through a vent ≥1.3 sq.in.	
12.	Subcooling Margin Monitor	1	None	Not required below 515°F	
13.	Auxiliary Feed Flow Rate Indication	1 per flow[h] Control Valve	None	Not required below 325°F	
14.	Auxiliary Feedwater System Sensor Channels	2 per steam generator[e]	1	Not required Actuation below 325°F	
15.	Auxiliary Feedwater Actuation System Actuation Channels	2[f]	1	Not required below 325°F	
16.	Excore Detector	1[g]	None	None	

(e) Auxiliary Feedwater System Actuation System Sensor Channels contain pump auto initiation circuitry. If two sensor channels for one steam generator are inoperable, one of the steam generator low level bistable modules in one of the inoperable channels must be in the tripped condition.

Amendment No. 88, 96,

Table 3.17.4   (Cont'd)

(f)   With one Auxiliary Feedwater Actuation System Actuation Channel inoperable, in lieu of the requirement of 3.17.2, provide a second licensed operator in the control room within 2 hours. With both inoperable, in lieu of following the requirements of 3.17.2, start and maintain in operation the turbine driven auxiliary feed pump.

(g)   Calculate the Quadrant Power Tilt using the excore readings at least once per 12 hours when the excore detectors deviation alarms are inoperable.

(h)   With two flow rate indicators inoperable for a given control valve, the control valve shall be considered inoperable and the requirements of 3.5.2(e) apply.

(1)   The provisions of Specification 3.0.4 are not applicable.   /

(p)   With one OPERABLE Pressurizer Wide Range Water Level Channel in   /
        lieu of the requirement of 3.17.2, restore the inoperable channel   /
        to OPERABLE status within 7 days or be in at least HOT SHUTDOWN   /
        within the next 12 hours.

(q)   With no OPERABLE Pressurizer Wide Range Water Level Channels in   /
        lieu of the requirements of 3.17.2, either restore at least one   /
        of the inoperable channels to OPERABLE status within 48 hours,   /
        or be in at least HOT SHUTDOWN within the next 12 hours."   /

OC0888-0093-NL02-NL04

TABLE 4.1.3

Minimum Frequencies for Checks, Calibrations and Testing of Miscellaneous Instrumentation and Controls

Channel Description		Surveillance Function	Frequency		Surveillance Method
1. Start-Up Range Neutron Monitors	a.	Check	S	a.	Comparison of both channel count rate indications when in service.
	b.	Test	P	b.	Internal test signals.
2. Primary Rod Position Indication System	a.	Check	S	a.	Comparison of output data with secondary RPIS
	b.	Check	M	b.	Check of power dependent insertion limits monitoring system.
	c.	Calibrate(1)	R	c.	Physically measured rod drive position used to verify system accuracy. Check rod position interlocks.
3. Secondary Rod Position Indication System	a.	Check	S	a.	Comparison of output data with primary RPIS.
	b.	Check	M	b.	Same as 2(b) above.
	c.	Calibrate(1)	R	c.	Same as 2(c) above, including out-of-sequence alarm function.
4. Area Monitors Note: Process Monitor Surveillance Requirements are located in Tables 4.24-1 and 4.24-2	a.	Check	D	a.	Normal readings observed and internal test signals used to verify instrument operation.
	b.	Calibrate	R	b.	Exposure to known external radiation source.
	c.	Test	M	c.	Detector exposed to remote operated radiation check source.
5. Emergency Plan Radiation Instruments	a.	Calibrate	A	a.	Exposure to known radiation source.
	b.	Test	M	b.	Battery check.
6. Environmental Monitors	a.	Check	M	a.	Operational check.
	b.	Calibrate	A	b.	Verify airflow indicator.
7. Pressurizer Level Instruments	a.	Check	S	a.	Comparison of two wide and two narrow range independent level readings.
	b.	Calibrate	R	b.	Known differential pressure applied to sensor.
	c.	Test	M	c.	Signal to meter relay adjusted with test device.

Amendment No. 38, 83,

0C0888-0093-NL02-NL04

4.1   <u>Basis</u> (continued)   /

For the specified one-month test interval, the average unprotected
time is 360 hours in case of a failure occurring between test
intervals, thus the probability of failure of one channel between
test intervals is $360 \times 1.14 \times 10^{-5}$ or 4.1×10^{-3}. Since two
channels must fail in order to negate the safety function, the
probability of simultaneous failure of two-out-of-four channels is
$(4.1 \times 10^{-3})^3 = 6.9 \times 10^{-8}$. This represents the fraction of time
in which each four-channel system would have one operable and three
inoperable channels and equals $6.9 \times 10^{-8} \times 8760$ hours per year, or
2.16 seconds/year.

These estimates are conservative and may be considered upper limits.
Testing intervals will be adjusted as appropriate based on the
accumulation of specific operating history.

The testing frequency of the process instrumentation is considered
adequate (based on experience at other conventional and nuclear
plants on Consumers Power Company's system) to maintain the status
of the instruments so as to assure safe operation. As the reactor
protection system is not required when the plant is in a refueling
shutdown condition, routine testing is not required.

Those instruments which are similar to the reactor protective system
instruments are tested at a similar frequency and on the same basis.

Since the wide and narrow range indicators are calibrated at   /
different temperatures it is not appropriate to compare the wide   /
range instruments with the narrow range. The shift comparison   /
surveillance requirement, Table 4.1.3, item No. 7a., is intended   /
to compare the two wide range indicators with each other and the   /
two narrow range indicators with each other.   /

Amendment No. 31,

0C0888-0093-NL02-NL04

ATTACHMENT

Consumers Power Company
Palisades Plant
Docket 50-255

REVISION TO PAGES FOR NOVEMBER 21, 1985
TSCR ALTERNATE SHUTDOWN AND
EMERGENCY LIGHTING SYSTEMS

August 19, 1988

2 Pages

Table 3.25.1

ALTERNATE SHUTDOWN MINIMUM EQUIPMENT

No	Instrumentation	Minimum Equipment	Readout Location
1	Pressurizer Pressure (PI-0110)	1	C150
2	Pressurizer Level (LI-0102B)	1	C150
3	Reactor Coolant Hot Leg Temperature (TI-0112HAA) (TI-0122HAA)	1/Loop	C150A
4	Reactor Coolant Cold Leg Temperature (TI-0112CAA) (TI-0122CAA)	1/Loop	C150A
5	Steam Generator Pressure (PI-0751E) (PI-0752E)	1/S.G.	C150A
6	Steam Generator Level (LI-0757C) (LI-0758C)	1/S.G.	C150
7	Start-up Range Neutron Monitor (N-001A)	1	C150A
8	Auxiliary Feedwater Suction Pressure (PS-0741D)	1	C150
9	SIRW Tank Level (LT-0332B)	1	C150A
10	Auxiliary Feedwater Flow Rate (FI-0727B) (FI-0749B)	1/S.G.	C150

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Proposed

TABLE 4.20.1

ALTERNATE SHUTDOWN MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

Channel Description	Surveillance Function		Frequency	Surveillance Method	
1. Pressurizer Pressure Indication (PI-0110)	a.	Check(1)	Quarterly	a.	Compare independent pressure readings
	b.	Calibrate	Refueling Cycle	b.	Known pressure applied to pressure sensor
2. Pressurizer Wide Range Level Indication (LI-0102B)	a.	Check(1)	Quarterly	a.	Compare independent level readings
	b.	Calibrate	Refueling Cycle	b.	Apply known differential pressure to level sensor
3. Reactor Coolant Hot Leg Temperature Indication (TI-0112HAA) (TI-0122HAA)	a.	Check(1)	Quarterly	a.	Compare independent temperature readings
	b.	Calibrate	Refueling Cycle	b.	Substitute known resistance for RTD
4. Reactor Coolant Cold Leg Temperature Indication (TI-0112CAA) (TI-0122CAA)	a.	Check(1)	Quarterly	a.	Compare independent temperature readings
	b.	Calibrate	Refueling Cycle	b.	Substitute known resistance for RTD
5. Steam Generator Pressure Indication (PI-0751E) (PI-0752E)	a.	Check(1)	Quarterly	a.	Compare independent pressure readings
	b.	Calibrate	Refueling Cycle	b.	Apply known pressure to pressure sensor
6. Steam Generator Level Indication (LI-0757C) (LI-0758C)	a.	Check(1)	Quarterly	a.	Compare independent level readings
	b.	Calibrate	Refueling Cycle	b.	Apply known differential pressure to level sensor

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Proposed