COOPER NUCLEAR STATION
TABLE 3.2.E
INSTRUMENTATION THAT MONITORS DRYWELL LEAK DETECTION

Instrument	Instrument I.D. No.	Setting Limit	Minimum Number of Operable Components	Action Required When Component Operability Is Not Assured (2)
Drywell Floor Drain Sump Flow	RW-FT-354	N.A.	1	A
Drywell Equipment Drain Sump Flow	RW-FT-364	N.A.	1	A
Air Sampling System	RMV-RM-4 A,B&C	N.A.	1	A

NOTES FOR TABLE 3.2.E

1. The two (2) flow transmitters, one for the equipment drain sump and the other for the floor drain sump, comprise the basic instrument system.

   The air sampling system is an alternate system to this system.

2. Action

   A. Refer to Specification 3.6.C of this Technical Specification.

COOPER NUCLEAR STATION
TABLE 3.2.F
PRIMARY CONTAINMENT SURVEILLANCE INSTRUMENTATION

Instrument	Instrument I.D. No.	Range	Minimum Number of Operable Instrument Channels	Action Required When Minimum Condition Not Satisfied (1)
Reactor Water Level	NBI-LI-85A	-150" to +60"	2	A,B,C
	NBI-LI-85B	-150" to +60"		
Reactor Pressure	RFC-PI-90A	0 - 1200 psig	2	A,B,C
	RFC-PI-90B	0 - 1200 psig		
Drywell Pressure	PC-PR-2A	-5 to 70 psig	2	A,B,C
	PC-PR-2B	-5 to 70 psig		
	PC-PR-1A	0 - 250 psig	2	F
	PC-PR-1B	0 - 250 psig		
Drywell Temperature	PC-TR-503	50 - 170°F	2	A,B,C
	PC-TI-505	50 - 350°F		
Suppression Chamber/Torus Air Temperature	PC-TR-21A	0 - 300°F	2	A,B,C
	PC-TR-23, Det 1 & 2	0 - 400°F		
Suppression Chamber/Torus Water Temperature	PC-TR-24, Det 1a to 1h	0 - 250°F	1 (2)	Note 2
	PC-TR-25, Det 2a to 2h	0 - 250°F		
Suppression Chamber/Torus Water Level	PC-LI-10	(-4' to +6')	2	A,B,C
	PC-LR-11	(-4' to +6')		
	PC-LI-12	-10" to +10"	2	A,B,C,E
	PC-LI-13	-10" to +10"		
	PC-LR-1A	0 - 30'	2	F
	PC-LR-1B	0 - 30'		
Suppression Chamber/Torus Pressure	PC-PR-20	0 - 2 psig	1	B,C
Control Rod Position	N.A.	Indicating Lights	1	A,B,C,D
Neutron Monitoring	N.A.	S.R.M., I.R.M., LPRM 0 - 100% power	1	A,B,C,D
Primary Containment Oxygen Concentration	PC-AN/CS-H_2/O_2 A	Various	2 (3)	A, B, C
	PC-AN/CS-H_2/O_2 B	Various		

NOTES FOR TABLE 3.2.F

1. The following actions will be taken if the minimum number of operable instrument channels as required are not available.

   A. From and after the date that one of these parameters is reduced to one indication, continued operation is permissible during the succeeding thirty days unless such instrumentation is sooner made operable.

   B. From and after the date that one of these parameters is not indicated in the control room, continued operation is permissible during the succeeding seven days unless such instrumentation is sooner made operable.

   C. If the requirements of A and B above cannot be met, an orderly shutdown shall be initiated within 24 hours.

   D. These surveillance instruments are considered to be redundant to each other.

   E. In the event that both channels are inoperable and indication cannot be restored in six (6) hours, an orderly shutdown shall be initiated and the reactor shall be in Hot Shutdown in six (6) hours and in a Cold Shutdown condition in the following eighteen (18) hours.

   F. From and after the date that one of these parameters is reduced to one indication, either restore the inoperable component(s) to operable status within 30 days of the event, or prepare and submit a Special Report to the Commission outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to operable status. In the event that both channels are inoperable and indication cannot be restored in fourteen (14) days, an orderly shutdown shall be initiated.

2. Each channel contains eight detectors. A channel is considered inoperable if two adjacent detectors are unmonitored by the channel in question.

   A. From and after the date that one channel becomes inoperable, continued operation is permissible during the succeeding seven days unless sooner made operable.

   B. From and after the date that the second channel becomes inoperable, an orderly shutdown shall be initiated within 48 hours unless sooner made operable.

3. During periods when both channels are inoperable, grab samples may be taken to verify primary containment oxygen concentration.

COOPER NUCLEAR STATION

TABLE 4.2.E

MINIMUM TEST AND CALIBRATION FREQUENCY FOR DRYWELL LEAK DETECTION

Item	Item I.D. No.	Function Test Freq.	Calibration Freq.	Instrument Check
Instrument Channel				
1. Equipment Drain Sump Flow	RW-FT-(364)	Once/Month (1)	Once/3 Months	Once/Day
2. Floor Drain Sump Flow	RW-FT-(354)	Once/Month (1)	Once/3 Months	Once/Day
3. Air Sampling System	RMV-RM-4A, B, & C	Once/Month (1)	Once/3 Months	Once/Day

COOPER NUCLEAR STATION
TABLE 4.2.F
PRIMARY CONTAINMENT SURVEILLANCE INSTRUMENTATION
TEST AND CALIBRATION FREQUENCIES

Instrument	Instrument I.D. No.	Calibration Frequency	Instrument Check
Reactor Water Level	NBI-LI-85A	Once/6 Months	Each Shift
	NBI-LI-85B	Once/6 Months	Each Shift
Reactor Pressure	RFC-PI-90A	Once/6 Months	Each Shift
	RFC-PI-90B	Once/6 Months	Each Shift
Drywell Pressure	PC-PR-2A	Once/6 Months	Each Shift
	PC-PR-2B	Once/6 Months	Each Shift
	PC-PR-1A	Once/6 Months	Each Shift
	PC-PR-1B	Once/6 Months	Each Shift
Drywell Temperature	PC-TR-503	Once/6 Months	Each Shift
	PC-TI-505	Once/6 Months	Each Shift
Suppression Chamber/Torus Air Temperature	PC-TR-21A	Once/6 Months	Each Shift
	PC-TR-23, Det 1 & 2	Once/6 Months	Each Shift
Suppression Chamber/Torus Water Temperature	PC-TR-24, Det 1a to 1h	Once/6 Months	Each Shift
	PC-TR-25, Det 2a to 2h	Once/6 Months	Each Shift
Suppression Chamber/Torus Water Level	PC-LI-10	Once/6 Months	Each Shift
	PC-LR-11	Once/6 Months	Each Shift
	PC-LI-12	Once/6 Months	Each Shift
	PC-LI-13	Once/6 Months	Each Shift
	PC-LR-1A	Once/6 Months	Each Shift
	PC-LR-1B	Once/6 Months	Each Shift
Suppression Chamber/Torus Pressure	PC-PR-20	Once/6 Months	Each Shift
Control Rod Position	N.A.	N.A.	Each Shift
Neutron Monitoring (APRM)	N.A.	Once/Week	Each Shift
Primary Containment Oxygen Concentration	PC-AN/CS-H_2/O_2 A	Once/3 Months	Once/Day
	PC-AN/CS-H_2/O_2 B	Once/3 Months	Once/Day