C. In the event that any of these monitoring channels become inoperable, they shall be made OPERABLE prior to startup following the next COLD SHUTDOWN.

D. Wide Range Torus Water Level Monitor

1. Two wide range torus water level monitor channels shall be continuously indicated in the control room during POWER OPERATION.

2. With the number of OPERABLE accident monitoring channels less than the total Number of Channels shown in Table 3.13.1, restore the inoperable channel(s) to OPERABLE status within 7 days or place the reactor in the SHUTDOWN CONDITION within the next 24 hours.

3. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels operable requirements of Table 3.13.1, restore the inoperable channel(s) to OPERABLE status within 48 hours or place the reactor in the SHUTDOWN CONDITION within the next 24 hours.

E. Wide Range Drywell Pressure Monitor

1. Two Wide Range Drywell Pressure monitor channels shall be continuously indicated in the control room during POWER OPERATION.

2. With the number of OPERABLE accident monitoring channels less than the total Number of Channels shown in Table 3.13.1, restore the inoperable channel(s) to OPERABLE status within 7 days or place the reactor in the SHUTDOWN CONDITION within the next 24 hours.

3. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels operable requirements of 3.13.1, restore the inoperable channel(s) to OPERABLE status within 48 hours or place the reactor in the SHUTDOWN CONDITION within the next 24 hours.

F. DELETED

G. Containment High-Range Radiation Monitor

1. Two containment high-range radiation monitors shall be OPERABLE when PRIMARY CONTAINMENT INTEGRITY is required.

2. With the number of OPERABLE monitors less than 2:

   a. Take appropriate action to restore the inoperable monitor(s) to OPERABLE status as soon as possible.

   b. Perform any actions required by Table 3.1.1.

   c. Restore the inoperable monitor(s) to OPERABLE status within 7 days of the failure or prepare and submit a Special Report within 14 days following the failure outlining the cause of inoperability, actions taken, and the planned schedule for restoring the monitors to OPERABLE status.

3. With the number of OPERABLE monitors less than 1, in addition to the actions of 3.13.G.2 above, restore at least 1 monitor to OPERABLE status within 7 days of the failure or have available a preplanned alternate method capable of being implemented to provide an estimate of the radioactive material in containment under accident conditions.

H. High-Range Radioactive Noble Gas Effluent Monitor

1. The high range radioactive noble gas effluent monitors listed in Table 3.13.1 shall be OPERABLE during POWER OPERATION.

2. With the number of OPERABLE channels less than required by the minimum channels OPERABLE requirements, restore the inoperable channel(s) to OPERABLE status within 7 days of the event or prepare and submit a Special Report within 30 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the equipment to OPERABLE status.

BASES

The purpose of the safety/relief valve accident monitoring instrumentation is to alert the operator to a stuck open safety/relief valve which could result in an inventory threatening event.

TABLE 3.13.1

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT		TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
1.	Relief Valve Position Indicator (Primary Detector*)	1/valve	
	Relief Valve Position Indicator (Backup Indications**)	1/valve	
2.	Wide Range Drywell Pressure Monitor (PT/PR-53 & 54)	2	1
3.	Wide Range Torus Water Level (LT/LR-37 & 38)	2	1
4.	DELETED		
5.	Containment High Range Radiation	2	1
6.	High Range Radioactive Noble Gas Effluent Monitor		
	a. Main Stack	1	1
	b. Turbine Building Vents	1	1

* Acoustic Monitor

** Thermocouple

Thermocouple TE 65A can be substituted for thermocouple TE210-43V, W, or X

Thermocouple TE 65B can be substituted for thermocouple TE210-43Y or Z

4.13 ACCIDENT MONITORING INSTRUMENTATION

Applicability: Applies to surveillance requirements for the accident monitoring instrumentation.

Objective: To verify the operability of the accident monitoring instrumentation.

Specification:

A. Safety & Relief Valve Position Indicators

Each accident monitoring instrumentation channel shall be demonstrated operable by performance of the Channel Check and Channel Calibration operations at the frequencies shown in Table 4.13-1.

B. Wide Range Drywell Pressure Monitor

Each accident monitoring instrumentation channel shall be demonstrated operable by performance of the Channel Check and Channel Calibration operations at the frequencies shown in Table 4.13-1.

C. Wide Range Torus Water Level Monitor

Each accident monitoring instrumentation channel shall be demonstrated operable by performance of the Channel Check and Channel Calibration operations at the frequencies shown in Table 4.13-1.

D. DELETED

E. Containment High-Range Radiation Monitor

Each accident monitoring instrumentation channel shall be demonstrated operable by performance of the Channel Check and Channel Calibration operations at the frequencies shown in Table 4.13-1.

F. High Range Radioactive Noble Gas Effluent Monitor

Each accident monitoring instrumentation channel shall be demonstrated operable by performance of the Channel Check and Channel Calibration operations at the frequencies shown in Table 4.13-1.

Bases:

The operability of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables during and following an accident. This capability is consistent with NUREGs 0578 and 0737.

TABLE 4.13-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHECK	CALIBRATION
1. Primary and Safety Valve Position Indicator (Primary Detector*)	A	B
Relief and Safety Valve Position Indicator (Backup Indications**)	A	B
Relief Valve Position Indicator (Common Header Temperature Element**)	C	B
2. Wide Range Drywell Pressure Monitor (PT/PR 53 & 54)	A	D
3. Wide Range Torus Water Level Monitor (LT/LR 37 & 38)	A	D
4. DELETED		
5. Containment High Range Radiation Monitor	A	F***
6. High Range Radioactive Noble Gas Effluent Monitor		
a. Main Stack	A	G
b. Turbine Building Vent	A	G

Legend:
A = at least once per 31 days
B = at least once per 24 months
C = at least once per 15 days until channel calibration is performed and thence at least once per 31 days
D = at least once per 6 months
E = DELETED
F = each refueling outage
G = once per 20 months

* Acoustic Monitor
** Thermocouple
*** Channel calibration shall consist of electronic signal substitution of the channel, not including the detector, for all decades above 10R/hr and a one point calibration check of the detector at or below 10R/hr by means of a calibrated portable radiation source traceable to NBS.