

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition C not met.	D.1 Enter the Condition referenced in Table 3.3.3.1-1 for the channel.	Immediately
E. As required by Required Action D.1 and referenced in Table 3.3.3.1-1.	E.1 Be in MODE 3.	12 hours
F. As required by Required Action D.1 and referenced in Table 3.3.3.1-1.	F.1 Initiate action in accordance with Specification 5.6.6.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.3.1.1 Perform CHANNEL CHECK for each required PAM instrumentation channel.	31 days
SR 3.3.3.1.2 Deleted	
SR 3.3.3.1.3 Perform CHANNEL CALIBRATION for each required PAM instrumentation channel.	24 months

Table 3.3.3.1-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1
1. Reactor Pressure	2	E
2. Reactor Vessel Water Level (Wide Range)	2	E
3. Reactor Vessel Water Level (Fuel Zone)	2	E
4. Suppression Chamber Water Level (Wide Range)	2	E
5. Drywell Pressure (Wide Range)	2	E
6. Drywell Pressure (Subatmospheric Range)	2	E
7. Drywell High Range Radiation	2	F
8. PCIV Position	2 per penetration flow path (a)(b)	E
9. Deleted		
10. Deleted		
11. Suppression Chamber Water Temperature	2(c)	E

- (a) Not required for isolation valves whose associated penetration flow path is isolated by at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.
- (b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.
- (c) Each channel requires 10 resistance temperature detectors (RTDs) to be OPERABLE with no two adjacent RTDs inoperable.

BASES

LCO
(continued)

9. 10. Deleted

11. Suppression Chamber Water Temperature

Instruments: TR-8123 A, B
TIS-2-2-71 A, B Recorders

Suppression chamber water temperature is a Category I variable provided to detect a condition that could potentially lead to containment breach and to verify the effectiveness of ECCS actions taken to prevent containment breach. The suppression chamber water temperature instrumentation allows operators to detect trends in suppression chamber water temperature in sufficient time to take action to prevent steam quenching vibrations in the suppression pool. Suppression chamber water temperature is monitored by two redundant channels. Each channel is assigned to a separate safeguard power division. Each channel consists of 13 resistance temperature detectors (RTDs) mounted in thermowells installed in the suppression chamber shell below the minimum water level, a processor, and control room recorders. The RTDs are mounted in each of 13 of the 16 segments of the suppression chamber. The RTD

(continued)

BASES (continued)

SURVEILLANCE
REQUIREMENTS

SR 3.3.3.1.1

Performance of the CHANNEL CHECK once every 31 days ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel against a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between instrument channels could be an indication of excessive instrument drift in one of the channels or something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying the instrumentation continues to operate properly between each CHANNEL CALIBRATION. The high radiation instrumentation should be compared to similar plant instruments located throughout the plant.

Agreement criteria are determined by the plant staff, based on a combination of the channel instrument uncertainties, including isolation, indication, and readability. If a channel is outside the criteria, it may be an indication that the sensor or the signal processing equipment has drifted outside its limit.

The Frequency of 31 days is based upon plant operating experience, with regard to channel OPERABILITY and drift, which demonstrates that failure of more than one channel of a given Function in any 31 day interval is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of those displays associated with the channels required by the LCO.

SR 3.3.3.1.2 Deleted |

SR 3.3.3.1.3 |

These SRs require CHANNEL CALIBRATIONS to be performed. A CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies the channel responds to measured parameter with the necessary range and accuracy. For the PCIV Position Function, the CHANNEL CALIBRATION consists of verifying the remote indication conforms to actual valve position.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.3.1.3 (continued)

The 24 month Frequency for CHANNEL CALIBRATION of PAM instrumentation of Table 3.3.3.1-1 is based on operating experience and consistency with the Peach Bottom Atomic Power Station refueling cycles.

REFERENCES

1. Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," Revision 3, May 1983.
 2. NRC Safety Evaluation Report, "Peach Bottom Atomic Power Station, Unit Nos. 2 and 3, Conformance to Regulatory Guide 1.97," January 15, 1988.
 3. Letter from G. Y. Suh (NRC) to G. J. Beck (PECo) dated February 13, 1991 concerning "Conformance to Regulatory Guide 1.97 for Peach Bottom Atomic Power Station, Units 2 and 3".
 4. Letter from S. Dembek (NRC) to G. A. Hunger (PECO Energy) dated March 7, 1994 concerning "Regulatory Guide 1.97 - Boiling Water Reactor Neutron Flux Monitoring, Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3".
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ACTIONS (continued)

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E. As required by Required Action D.1 and referenced in Table 3.3.3.1-1.	E.1 Be in MODE 3.	12 hours
F. As required by Required Action D.1 and referenced in Table 3.3.3.1-1.	F.1 Initiate action in accordance with Specification 5.6.6.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.3.1.1 Perform CHANNEL CHECK for each required PAM instrumentation channel.	31 days
SR 3.3.3.1.2 Deleted	
SR 3.3.3.1.3 Perform CHANNEL CALIBRATION for each required PAM instrumentation channel.	24 months

Table 3.3.3.1-1 (page 1 of 1)
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3. Reactor Vessel Water Level (Fuel Zone)	2	E
4. Suppression Chamber Water Level (Wide Range)	2	E
5. Drywell Pressure (Wide Range)	2	E
6. Drywell Pressure (Subatmospheric Range)	2	E
7. Drywell High Range Radiation	2	F
8. PCIV Position	2 per penetration flow path (a)(b)	E
9. Deleted		
10. Deleted		
11. Suppression Chamber Water Temperature	2(c)	E

- (a) Not required for isolation valves whose associated penetration flow path is isolated by at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.
- (b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.
- (c) Each channel requires 10 resistance temperature detectors (RTDs) to be OPERABLE with no two adjacent RTDs inoperable.

BASES

LCO
(continued)

9, 10. Deleted

11. Suppression Chamber Water Temperature

Instruments: TR-9123 A, B
TIS-3-2-71 A, B Recorders

Suppression chamber water temperature is a Category I variable provided to detect a condition that could potentially lead to containment breach and to verify the effectiveness of ECCS actions taken to prevent containment breach. The suppression chamber water temperature instrumentation allows operators to detect trends in suppression chamber water temperature in sufficient time to take action to prevent steam quenching vibrations in the suppression pool. Suppression chamber water temperature is monitored by two redundant channels. Each channel is assigned to a separate safeguard power division. Each channel consists of 13 resistance temperature detectors (RTDs) mounted in thermowells installed in the suppression chamber shell below the minimum water level, a processor, and control room recorders. The RTDs are mounted in each of 13 of the 16 segments of the suppression chamber. The RTD

(continued)

BASES (continued)

SURVEILLANCE
REQUIREMENTS

SR 3.3.3.1.1

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The Frequency of 31 days is based upon plant operating experience, with regard to channel OPERABILITY and drift, which demonstrates that failure of more than one channel of a given Function in any 31 day interval is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of those displays associated with the channels required by the LCO.

SR 3.3.3.1.2 Deleted |

SR 3.3.3.1.3 |

These SRs require CHANNEL CALIBRATIONS to be performed. A CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies the channel responds to measured parameter with the necessary range and accuracy. For the PCIV Position Function, the CHANNEL CALIBRATION consists of verifying the remote indication conforms to actual valve position.

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BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.3.1.3 (continued)

The 24 month Frequency for CHANNEL CALIBRATION of PAM instrumentation of Table 3.3.3.1-1 is based on operating experience and consistency with the Peach Bottom Atomic Power Station refueling cycles.

REFERENCES

1. Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," Revision 3, May 1983.
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