NSHC Number	NSHC Text
M	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change provides more restrictive requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter the assumptions relative to the mitigation of an accident or transient event. These more restrictive requirements continue to ensure process variables, structures, systems and components are maintained consistent with the safety analyses. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with assumptions made in the safety analysis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The imposition of more restrictive requirements either has no affect on or increases the margin of safety. Each change is providing additional restrictions to enhance plant safety. These changes are consistent with the safety analysis. Therefore, this change does not involve a reduction in a margin of safety.

3.3 INSTRUMENTATION

3.3.3 Post Accident Monitoring (PAM) Instrumentation

LCO 3.3.3 The PAM instrumentation for each Function in Table 3.3.3-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

----------NOTES----------
1. LCO 3.0.4 is not applicable.

2. Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one required channel inoperable.	A.1 Restore required channel to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action in accordance with Specification 5.6.8.	Immediately
C. ---------NOTE--------- Not applicable to hydrogen monitor channels. ---------- One or more Functions with two required channels inoperable.	C.1 Restore one channel to OPERABLE status.	7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. Two hydrogen monitor channels inoperable.	D.1	Restore one hydrogen monitor channel to OPERABLE status.	72 hours
E. Required Action and associated Completion Time of Condition C or D not met.	E.1	Enter the Condition referenced in Table 3.3.3-1 for the channel.	Immediately
F. As required by Required Action E.1 and referenced in Table 3.3.3-1.	F.1	Be in MODE 3.	6 hours
	AND		
	F.2	Be in MODE 4.	12 hours
G. As required by Required Action E.1 and referenced in Table 3.3.3-1.	G.1	Initiate action in accordance with Specification 5.6.8.	Immediately

SURVEILLANCE REQUIREMENTS

----------NOTE----------
SR 3.3.3.1 and SR 3.3.3.3 apply to each PAM instrumentation Function in Table 3.3.3-1, except Functions 12 and 14. SR 3.3.3.1 and SR 3.3.3.2 apply to Function 14 in Table 3.3.3-1. SR 3.3.3.1 and SR 3.3.3.4 apply to Function 12 in Table 3.3.3-1.

SURVEILLANCE		FREQUENCY
SR 3.3.3.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	31 days
SR 3.3.3.2	Calibrate gas portion of the Hydrog en Monitors.	92 days
SR 3.3.3.3	----------NOTE---------- Containment Area Radiation (High Range) detectors are excluded from CHANNEL CALIBRATION. ---------- Perform CHANNEL CALIBRATION.	18 months
SR 3.3.3.4	Perform TADOT.	18 months

Table 3.3.3-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITION REFERENCED FROM REQUIRED ACTION E.1
1. Reactor Coolant System (RCS) Subcooling Monitor	2	F
2. RCS Hot Leg Temperature (Wide Range)	2 per loop	F
3. RCS Cold Leg Temperature (Wide Range)	2 per loop	F
4. RCS Pressure (Wide Range)	2	F
5. RCS Pressure (Narrow Range)	2	F
6. Reactor Vessel Water Level (Wide Range)	2	F
7. Reactor Vessel Water Level (Narrow Range)	2	F
8. Containment Sump B Water Level	2	F
9. Containment Pressure (Wide Range)	2	F
10. Containment Pressure (Intermediate Range)	2	F
11. Containment Pressure (Low Range)	2	F
12. Containment Isolation Valve Position	2 per penetration flow path[(a)(b)]	F
13. Containment Area Radiation (High Range)	2	G
14. Hydrogen Monitors	2	F
15. Pressurizer Level	2	F
16. Steam Generator Water Level (Wide Range)	2 per steam generator	F
17. Steam Generator Water Level (Narrow Range)	2 per steam generator	F
18. Steam Generator Pressure	2 per steam generator	F
19. Condensate Storage Tank Level	2 per tank	F
20. Core Exit Temperature – Quadrant 1	2	F
21. Core Exit Temperature – Quadrant 2	2	F
22. Core Exit Temperature – Quadrant 3	2	F
23. Core Exit Temperature – Quadrant 4	2	F
24. Auxiliary Feedwater Flow	1 per steam generator	NA
25. Refueling Water Storage Tank Level	2	F

(a) Not required for isolation valves whose associated penetration 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.

B 3.3 INSTRUMENTATION

B 3.3.3 Post Accident Monitoring (PAM) Instrumentation

BASES

BACKGROUND

The primary purpose of the PAM instrumentation is to display unit variables that provide information required by the control room operators during accident situations. This information provides the necessary support for the operator to take the manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for Design Basis Accidents (DBAs).

The OPERABILITY of the accident monitoring instrumentation ensures that there is sufficient information available on selected unit parameters to monitor and to assess unit status and behavior following an accident.

The availability of accident monitoring instrumentation is important so that responses to corrective actions can be observed and the need for, and magnitude of, further actions can be determined. These essential instruments identified in Reference 1 address the recommendations of Regulatory Guide 1.97 (Ref. 2) as required by Supplement 1 to NUREG-0737 (Ref. 3).

The instrument channels required to be OPERABLE by this LCO include two classes of parameters identified during unit specific implementation of Regulatory Guide 1.97 as Type A and Category I variables.

Type A variables are included in this LCO because they provide the primary information required for the control room operator to take specific manually controlled actions for which no automatic control is provided, and that are required for safety systems to accomplish their safety functions for DBAs.

Category I variables are the key variables deemed risk significant because they are needed to:

- Determine whether other systems important to safety are performing their intended functions;

BASES

BACKGROUND (continued)

- Provide information to the operators that will enable them to determine the likelihood of a gross breach of the barriers to radioactivity release; and

- Provide information regarding the release of radioactive materials to allow for early indication of the need to initiate action necessary to protect the public, and to estimate the magnitude of any impending threat.

These key variables are identified by the Regulatory Guide 1.97 analyses (Ref. 1). These analyses identify the unit specific Type A and Category I variables and provide justification for deviating from the NRC proposed list of Category I variables.

The specific instrument Functions listed in Table 3.3.3-1 are discussed in the LCO section.

APPLICABLE SAFETY ANALYSES

The PAM instrumentation ensures the operability of Regulatory Guide 1.97 Type A and Category I variables so that the control room operating staff can:

- Perform the diagnosis specified in the emergency operating procedures (these variables are restricted to preplanned actions for the primary success path of DBAs), e.g., loss of coolant accident (LOCA);

- Take the specified, pre-planned, manually controlled actions, for which no automatic control is provided, and that are required for safety systems to accomplish their safety function;

- Determine whether systems important to safety are performing their intended functions;

- Determine the likelihood of a gross breach of the barriers to radioactivity release;

- Determine if a gross breach of a barrier has occurred; and

BASES

APPLICABLE SAFETY ANALYSES (continued)

- Initiate action necessary to protect the public and to estimate the magnitude of any impending threat.

PAM instrumentation that meets the definition of Type A in Regulatory Guide 1.97 satisfies Criterion 3 of the NRC Policy Statement. Category I, non-Type A, instrumentation must be retained in TS because it is intended to assist operators in minimizing the consequences of accidents. Therefore, Category I, non-Type A, variables are important for reducing public risk.

LCO

The PAM instrumentation LCO provides OPERABILITY requirements for Regulatory Guide 1.97 Type A monitors, which provide information required by the control room operators to perform certain manual actions specified in the unit Emergency Operating Procedures. These manual actions ensure that a system can accomplish its safety function, and are credited in the safety analyses. Additionally, this LCO addresses Regulatory Guide 1.97 instruments that have been designated Category I, non-Type A.

The OPERABILITY of the PAM instrumentation ensures there is sufficient information available on selected unit parameters to monitor and assess unit status following an accident. This capability is consistent with the recommendations of Reference 2.

LCO 3.3.3 requires two OPERABLE channels for most Functions. Two OPERABLE channels ensure no single failure prevents operators from getting the information necessary for them to determine the safety status of the unit, and to bring the unit to and maintain it in a safe condition following an accident.

Furthermore, OPERABILITY of two channels allows a CHANNEL CHECK during the post accident phase to confirm the validity of displayed information.

One exception to the two channel requirement is Containment Isolation Valve (CIV) Position. In this case, the important information is the status of the containment penetrations. The LCO requires one position indicator for each active CIV. This is sufficient to redundantly verify the isolation status

BASES

LCO (continued)

of each isolable penetration either via indicated status of the active valve and prior knowledge of a passive valve, or via system boundary status. If a normally active CIV is known to be closed and deactivated, position indication is not needed to determine status. Therefore, the position indication for valves in this state is not required to be OPERABLE.

Another exception to the two channel requirement is AFW flow, because it is a backup indication to Steam Generator Water Level (Narrow Range).

Table 3.3.3-1 provides a list of variables identified by the Regulatory Guide 1.97 (Ref. 1) analyses. Table 3.3.3-1 lists all Type A and Category I variables identified by the Regulatory Guide 1.97 analyses, as amended by the NRC's SER.

Type A and Category I variables are required to meet Regulatory Guide 1.97 Category I (Ref. 2) design and qualification requirements for seismic and environmental qualification, single failure criterion, utilization of emergency standby power, immediately accessible display, continuous readout, and recording of display.

Listed below are discussions of the specified instrument Functions listed in Table 3.3.3-1.

1. Reactor Coolant System (RCS) Subcooling Monitor

RCS Subcooling Monitor is a Type A variable provided for verification of core cooling and long term surveillance of RCS integrity. The RCS Subcooling Monitor is used to provide information to the operator on subcooling, derived from RCS Hot Leg Temperature or Core Exit Thermocouples, and RCS pressure. RCS Subcooling margin is used to determine whether to terminate SI, if still in progress, or to reinitiate SI if it has stopped. RCS Subcooling margin is also used for plant stabilization and cooldown control.

BASES

LCO (continued)

2, 3. Reactor Coolant System (RCS) Hot and Cold Leg Temperatures (Wide Range)

RCS Hot and Cold Leg Temperatures (Wide Range) are Category I variables provided for verification of core cooling and long term surveillance.

RCS hot and cold leg temperatures are used to determine RCS subcooling margin and verify adequate core cooling. RCS subcooling margin will allow termination of safety injection (SI), if still in progress, or reinitiation of SI if it has been stopped. RCS subcooling margin is also used for unit stabilization and cooldown control.

In addition, RCS cold leg temperature is used in conjunction with RCS hot leg temperature to verify the unit conditions necessary to establish natural circulation in the RCS.

Temperature inputs are provided by two independent temperature resistance elements and associated transmitters in each loop. The channels provide indication over a range of 50 °F to 750°F.

4, 5. Reactor Coolant System Pressure (Wide and Narrow Range)

RCS narrow range pressure is a Category I variable provided for verification of core cooling and RCS integrity long term surveillance.

RCS wide range pressure is a Type A variable used to select high-head or low-head Safety Injection for recirculation.

RCS pressure is used to verify delivery of SI flow to RCS from at least one train when the RCS pressure is below the pump shutoff head. RCS pressure is also used to verify closure of manually closed spray line valves and pressurizer power operated relief valves (PORVs).

In addition to these verifications, RCS pressure is used for determining RCS subcooling margin. RCS subcooling margin will allow termination of SI, if

BASES

LCO (continued)

still in progress, or reinitiation of SI if it has been stopped. RCS pressure can also be used:

- to determine whether to terminate actuated SI or to reinitiate stopped SI;
- to determine when to reset SI and shut off low head SI;
- to manually restart low head SI;
- as reactor coolant pump (RCP) trip criteria; and
- to make a determination on the nature of the accident in progress and where to go next in the procedure.

RCS subcooling margin is also used for unit stabilization and cooldown control.

RCS pressure is also related to three decisions about depressurization. They are:

- to determine whether to proceed with primary system depressurization;
- to verify termination of depressurization; and
- to determine whether to close accumulator isolation valves during a controlled cooldown/depressurization.

A final use of RCS pressure is to determine whether to operate the pressurizer heaters.

RCS pressure is a Type A variable because the operator uses this indication to monitor the cooldown of the RCS following a steam generator tube rupture (SGTR) or small break LOCA. Operator actions to maintain a controlled cooldown, such as adjusting steam generator (SG) pressure or level, would use this indication. Furthermore, RCS pressure is one factor that may be used in decisions to terminate RCP operation.

BASES

LCO (continued)

6. 7. Reactor Vessel Water Level

Reactor Vessel Water Level is provided for verification and long term surveillance of core cooling. It is also used for accident diagnosis and to determine reactor coolant inventory adequacy.

The Reactor Vessel Water Level Monitoring System provides a direct measurement of the collapsed liquid level above the fuel alignment plate. The collapsed level represents the amount of liquid mass that is in the reactor vessel above the core. Measurement of the collapsed water level is selected because it is a direct indication of the water inventory.

8. Containment Sump B Water Level

Containment Sump B Water Level is provided for verification and long term surveillance of RCS integrity.

Containment Sump B Water Level is used to determine:

- containment sump B level accident diagnosis;
- when to begin the recirculation procedure; and
- whether to terminate SI, if still in progress.

9. 10. 11. Containment Pressure (Wide, Intermediate and Low Range)

Containment pressure is a Type A variable used to correct RCS pressure in a post LOCA condition.

Containment Pressure is also provided for verification of RCS and containment OPERABILITY.

12. Containment Isolation Valve Position

CIV Position is provided for verification of Containment OPERABILITY, and Containment isolation.

When used to verify Containment isolation, the important information is the isolation status of the containment penetrations. The LCO requires one channel

BASES

LCO (continued)

of valve position indication in the control room to be OPERABLE for each active CIV in a containment penetration flow path, i.e., two total channels of CIV position indication for a penetration flow path with two active valves. For containment penetrations with only one active CIV having control room indication, Note (b) requires a single channel of valve position indication to be OPERABLE. This is sufficient to redundantly verify the isolation status of each isolable penetration either via indicated status of the active valve, as applicable, and prior knowledge of a passive valve, or via system boundary status. If a normally active CIV is known to be closed and deactivated, position indication is not needed to determine status. Therefore, the position indication for valves in this state is not required to be OPERABLE. Note (a) to the Required Channels states that the Function is not required for isolation valves whose associated penetration 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.

13. Containment Area Radiation (High Range)

Containment Area Radiation is provided to monitor for the potential of significant radiation releases and to provide release assessment for use by operators in determining the need to invoke site emergency plans. Containment radiation level is used to determine if a high energy line break (HELB) has occurred, and whether the event is inside or outside of containment.

14. Hydrogen Monitors

Hydrogen Monitors are provided to detect high hydrogen concentration conditions that represent a potential for containment breach from a hydrogen explosion. This variable is also important in verifying the adequacy of mitigating actions.

15. Pressurizer Level

Pressurizer Level is used to determine whether to terminate SI, if still in progress, or to reinitiate SI

BASES

LCO (continued)

if it has been stopped. Knowledge of pressurizer water level is also used to verify the unit conditions necessary to establish natural circulation in the RCS and to verify that the unit is maintained in a safe shutdown condition.

16. Steam Generator Water Level (Wide Range)

SG Water Level is provided to monitor operation of decay heat removal via the SGs. The Category I indication of SG level is the wide range level instrumentation. The wide range level covers a span of 0 inches to 520 inches above the lower tubesheet. The measured differential pressure is displayed in inches of water at 68°F.

Redundant monitoring capability is provided by two trains of instrumentation. The level signal is input to the unit computer, a control room indicator, and an indicator in the AFW Pump Room.

17. Steam Generator Water Level (Narrow Range)

Steam Generator Water Level (Narrow Range) is a Type A variable provided to aid operators in the control of AFW Flow to maintain the SGs as a heat sink.

18. Steam Generator Pressure

Steam Generator Pressure is a Type A variable provided to detect and mitigate a SGTR event. The signals from transmitters are calibrated for a range of 0 psig to 1400 psig. Redundant monitoring capability is provided by three available trains of instrumentation for each steam generator.

19. Condensate Storage Tank (CST) Level

CST Level is provided to ensure water supply for auxiliary feedwater (AFW). The CST consists of two identical tanks connected by a common outlet header. Inventory is monitored by two 0 foot to 21.5 foot level indicators per tank. CST Level is displayed on a control room indicator, strip chart recorder, and unit

BASES

LCO (continued)

computer. In addition, a control room annunciator alarms on low level.

The DBAs that require AFW are the loss of electric power, loss of normal feedwater, steam line break (SLB), and small break LOCA.

The CST is the initial source of water for the AFW System. However, as the CST is depleted, manual operator action is necessary to replenish the CST or align suction to the AFW pumps from Service Water.

20, 21, 22, 23. Core Exit Temperature

Core Exit Temperature is provided for verification and long term surveillance of core cooling.

An evaluation was made of the minimum number of valid core exit thermocouples (CET) necessary for measuring core cooling. The evaluation determined the reduced complement of CETs necessary to detect initial core recovery and trend the ensuing core heatup. The evaluations account for core nonuniformities, including incore effects of the radial decay power distribution, excore effects of condensate runback in the hot legs, and nonuniform inlet temperatures. Based on these evaluations, adequate core cooling is ensured with two valid Core Exit Temperature channels per quadrant. The CET pair are oriented radially to permit evaluation of core radial decay power distribution. Core Exit Temperature is used to control RCS pressure and temperature in the mitigation of a SGTR event.

Two OPERABLE channels of Core Exit Temperature are required in each quadrant to provide indication of radial distribution of the coolant temperature rise across representative regions of the core.

24. Auxiliary Feedwater Flow

AFW Flow is provided to monitor operation of decay heat removal via the SGs.

The AFW Flow to each SG is determined from a differential pressure measurement calibrated for a

BASES

LCO (continued)

range of 0 gpm to 500 gpm. Each differential pressure transmitter provides an input to a control room indicator and the unit computer. Since the primary indication used by the operator during an accident is the control room indicator, the PAM specification deals specifically with this portion of the instrument channel.

AFW flow is used three ways:

- to verify delivery of AFW flow to the SGs and verify AFW flow is isolated to a faulted SG;
- to determine whether to terminate SI if still in progress, in conjunction with SG water level (narrow range); and
- to regulate AFW flow so that the SG tubes remain covered.

AFW flow is a Type A variable because operator action is required to throttle flow during an SLB accident to prevent the AFW pumps from operating in runout conditions. AFW flow is also used by the operator to verify that the AFW System is delivering the correct flow to each SG. However, the primary indication used by the operator to ensure an adequate inventory is SG level.

25. Refueling Water Storage Tank (RWST) Level

RWST Level is a Type A variable provided for verifying a water source to the SI System during the injection phase of a LOCA, and to indicate when manual switchover to recirculation is required on decreasing level. The RWST Level accuracy is established to allow an adequate supply of water to the SI pumps during the switchover to the recirculation phase of an accident. A high degree of accuracy is required to maximize the time available to the operator to complete the switchover to the sump recirculation phase and ensure sufficient water is available to maintain adequate net positive suction head (NPSH) to operating pumps.

BASES

APPLICABILITY

The PAM instrumentation LCO is applicable in MODES 1, 2, and 3. These variables are related to the diagnosis and pre-planned actions required to mitigate DBAs. The applicable DBAs are assumed to occur in MODES 1, 2, and 3. In MODES 4, 5, and 6, unit conditions are such that the likelihood of an event that would require PAM instrumentation is low; therefore, the PAM instrumentation is not required to be OPERABLE in these MODES.

ACTIONS

Note 1 has been added in the ACTIONS to exclude the MODE change restriction of LCO 3.0.4. This exception allows entry into the applicable MODE while relying on the ACTIONS even though the ACTIONS may eventually require unit shutdown. This exception is acceptable due to the passive function of the instruments, the operator's ability to respond to an accident using alternate instruments and methods, and the low probability of an event requiring these instruments.

Note 2 has been added in the ACTIONS to clarify the application of Completion Time rules. The Conditions of this Specification may be entered independently for each Function listed on Table 3.3.3-1. The Completion Time(s) of the inoperable channel(s) of a Function will be tracked separately for each Function starting from the time the Condition was entered for that Function.

A.1

Condition A applies when one or more Functions have one required channel that is inoperable. Required Action A.1 requires restoring the inoperable channel to OPERABLE status within 30 days. The 30 day Completion Time is based on operating experience and takes into account the remaining OPERABLE channel (or in the case of a Function that has only one required channel, other non-Regulatory Guide 1.97 instrument channels to monitor the Function), the passive nature of the instrument (no critical automatic action is assumed to occur from these instruments), and the low probability of an event requiring PAM instrumentation during this interval.

B.1

Condition B applies when the Required Action and associated Completion Time for Condition A are not met. This Required Action specifies initiation of actions in Specification

BASES

ACTIONS (continued)

5.6.8, which requires a written report to be submitted to the NRC immediately. This report discusses the results of the root cause evaluation of the inoperability and identifies proposed restorative actions. This action is appropriate in lieu of a shutdown requirement since alternative actions are identified before loss of functional capability, and given the likelihood of unit conditions that would require information provided by this instrumentation.

C.1

Condition C applies when one or more Functions have two inoperable required channels (i.e., two channels inoperable in the same Function). Required Action C.1 requires restoring one channel in the Function(s) to OPERABLE status within 7 days. The Completion Time of 7 days is based on the relatively low probability of an event requiring PAM instrument operation and the availability of alternate means to obtain the required information. Continuous operation with two required channels inoperable in a Function is not acceptable because the alternate indications may not fully meet all performance qualification requirements applied to the PAM instrumentation. Therefore, requiring restoration of one inoperable channel of the Function limits the risk that the PAM Function will be in a degraded condition should an accident occur. Condition C is modified by a Note that excludes hydrogen monitor channels.

D.1

Condition D applies when two hydrogen monitor channels are inoperable. Required Action D.1 requires restoring one hydrogen monitor channel to OPERABLE status within 72 hours. The 72 hour Completion Time is reasonable based on the backup capability of the Post Accident Sampling System to monitor the hydrogen concentration for evaluation of core damage and to provide information for operator decisions. Also, it is unlikely that a LOCA (which would cause core damage) would occur during this time.

E.1

Condition E applies when the Required Action and associated Completion Time of Condition C or D are not met. Required Action E.1 requires entering the appropriate Condition

BASES

ACTIONS (continued)

referenced in Table 3.3.3-1 for the channel immediately. The applicable Condition referenced in the Table is Function dependent. Each time an inoperable channel has not met any Required Action of Condition C or D, and the associated Completion Time has expired, Condition E is entered for that channel and provides for transfer to the appropriate subsequent Condition.

F.1 and F.2

If the Required Action and associated Completion Time of Conditions C or D are not met and Table 3.3.3-1 directs entry into Condition F, the unit must be brought to a MODE where the requirements of this LCO do not apply. To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and MODE 4 within 12 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

G.1

Alternate means of monitoring Contai nment Area Radiation have been developed and tested. These alternate means may be used if the normal PAM channel cannot be restored to OPERABLE status within the allotted time. If these alternate means are used, the Required Action is not to shut down the unit but rather to follow the directions of Specification 5.6.8, in the Administrative Controls section of the TS. The report provided to the NRC should discuss the alternate means used, describe the degree to which the alternate means are equivalent to the installed PAM channels, justify the areas in which they are not equivalent, and provide a schedule for restoring the normal PAM channels.

BASES

SURVEILLANCE REQUIREMENTS

A Note has been added to the SR Table to clarify that SR 3.3.3.1 and SR 3.3.3.3 apply to each PAM instrumentation Function in Table 3.3.3-1, except Functions 12 and 14. SR 3.3.3.1 and SR 3.3.3.2 apply to Function 14 in Table 3.3.3-1. SR 3.3.3.1 and SR 3.3.3.4 apply to Function 12 in Table 3.3.3-1.

SR 3.3.3.1

Performance of the CHANNEL CHECK once every 31 days ensures that a gross instrumentation failure has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to 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 the two instrument channels could be an indication of excessive instrument drift in one of the channels or of 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 unit instruments located throughout the unit.

Agreement criteria are determined by the unit 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. If the channels are within the criteria, it is an indication that the channels are OPERABLE.

As specified in the SR, a CHANNEL CHECK is only required for those channels that are normally energized.

The Frequency of 31 days is based on operating experience that demonstrates that channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.3.2

SR 3.3.3.2 requires calibration of the gas portion of the hydrogen monitors every 92 days. The calibration shall consist of a verification of the monitors response to a known concentration of hydrogen gas. The Frequency of 92 days is reasonable based on operating experience to ensure the OPERABILITY of the monitors.

SR 3.3.3.3

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to measured parameter with the necessary range and accuracy. This SR is modified by a Note that excludes the Containment Area Radiation (High Range) detectors. The CHANNEL CALIBRATION shall include a verification of a response to a source to verify detector OPERABILITY. The Frequency is based on operating experience and consistency with the typical industry refueling cycle.

SR 3.3.3.4

SR 3.3.3.4 is the performance of a TADOT of Containment Isolation Valve Position Indication. This TADOT is performed every 18 months. The test shall independently verify the OPERABILITY of containment isolation valve position indication against the actual position of the valves.

The Frequency is based on the known reliability of the Functions and has been shown to be acceptable through operating experience.

REFERENCES

1. NRC SER Letter, "Conformance to Regulatory Guide 1.97 for the Point Beach Nuclear Plant Units 1 and 2," July 11, 1986.

2. Regulatory Guide 1.97, Revision 2, December 1980.

3. NUREG-0737, Supplement 1, "TMI Action Items."

Justification For Deviations - NUREG-1431 Section 3.03.04

13-Nov-99

JFD Number	JFD Text
01	NUREG 1431 LCO 3.3.4, Remote Shutdown System, has not been adopted as part of Point Beach's conversion to the Improved Technical Specifications. The Point Beach CTS does not contain any Specifications which would require operability of instrumentation or controls associated with the capability to remotely shutdown the units.

ITS:	NUREG:
N/A	LCO 3.03.04
	LCO 3.03.04 COND A
	LCO 3.03.04 COND A RA A.1
	LCO 3.03.04 COND B
	LCO 3.03.04 COND B RA B.1
	LCO 3.03.04 COND B RA B.2
	LCO 3.03.04 COND NOTE 1
	LCO 3.03.04 COND NOTE 2
	LCO 3.03.04 T 3.03.03-1 01A
	LCO 3.03.04 T 3.03.03-1 01B
	LCO 3.03.04 T 3.03.03-1 02A-01
	LCO 3.03.04 T 3.03.03-1 02A-02
	LCO 3.03.04 T 3.03.03-1 02B
	LCO 3.03.04 T 3.03.03-1 03A
	LCO 3.03.04 T 3.03.03-1 03B
	LCO 3.03.04 T 3.03.03-1 03C
	LCO 3.03.04 T 3.03.03-1 03D
	LCO 3.03.04 T 3.03.03-1 03E-01
	LCO 3.03.04 T 3.03.03-1 03E-02
	LCO 3.03.04 T 3.03.03-1 04A
	LCO 3.03.04 T 3.03.03-1 04B

1

3.3 INSTRUMENTATION

3.3.4 Remote Shutdown System

LCO 3.3.4 The Remote Shutdown System Functions in Table 3.3.4-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

----------NOTES----------

1. LCO 3.0.4 is not applicable.

2. Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more required Functions inoperable.	A.1	Restore required Function to OPERABLE status.	30 days
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	Be in MODE 4.	12 hours

Cross-Reference Report - NUREG-1431 Section 3.03.05

ITS to CTS

13-Nov-99

ITS	CTS	DOC
LCO 3.03.04	15.03.05 T 15.03.05-03	A.04
	15.03.05 T 15.03.05-03	A.03
LCO 3.03.04 COND NOTE	15.03.05 T 15.03.05-03 NOTE ***	A.01
LCO 3.03.04 COND A	15.03.05 T 15.03.05-03 04.A.I**	L.01
	15.03.05 T 15.03.05-03 04.A.II**	L.01
	15.03.05 T 15.03.05-03 04.B.I**	L.01
	15.03.05 T 15.03.05-03 NOTE **	L.01
LCO 3.03.04 COND A NOTE	NEW	L.02
LCO 3.03.04 COND A RA A.1	15.03.05 T 15.03.05-03 04.A.I**	L.01
	15.03.05 T 15.03.05-03 04.A.II**	L.01
	15.03.05 T 15.03.05-03 04.B.I**	L.01
	15.03.05 T 15.03.05-03 NOTE **	L.01
LCO 3.03.04 COND B	NEW	L.03
LCO 3.03.04 COND B RA B.1	NEW	L.03
LCO 3.03.04 COND C	15.03.05 T 15.03.05-03 04.A.I***	A.01
	15.03.05 T 15.03.05-03 04.A.II***	A.01
	15.03.05 T 15.03.05-03 NOTE ***	A.01
LCO 3.03.04 COND C RA C.1	15.03.05 T 15.03.05-03 04.A.I***	A.01
	15.03.05 T 15.03.05-03 04.A.II***	A.01
	15.03.05 T 15.03.05-03 NOTE ***	A.01
LCO 3.03.04 COND D	15.03.05 T 15.03.05-03 04.B.I	M.01
LCO 3.03.04 COND D RA D.1	15.03.05 T 15.03.05-03 04.B.I	M.01
	15.03.05 T 15.03.05-03 04.B.I*	M.01
LCO 3.03.04 COND E	15.03.05 T 15.03.05-03 NOTE *	M.01
LCO 3.03.04 COND E RA E.1	15.03.05 T 15.03.05-03 NOTE *	M.01
LCO 3.03.04 COND E RA E.2	15.03.05 T 15.03.05-03 NOTE *	M.01
LCO 3.03.04.a	15.03.05 T 15.03.05-01 10.A	A.01
	15.03.05 T 15.03.05-03 04.A.II	A.02
	15.03.05 T 15.03.05-03 04.A.II	A.03
LCO 3.03.04.b	15.03.05 T 15.03.05-01 09	A.01
	15.03.05 T 15.03.05-03 04.A.I	A.02
	15.03.05 T 15.03.05-03 04.A.I	A.03
LCO 3.03.04.c	15.03.05 T 15.03.05-01 10.B	A.01
	15.03.05 T 15.03.05-03 04.B.I	A.03
	15.03.05 T 15.03.05-03 04.B.I	A.02

Cross-Reference Report - NUREG-1431 Section 3.03.05

ITS to CTS

13-Nov-99

ITS	CTS	DOC
SR 3.03.04.01	15.04.01 T 15.04.01-01 13.A	A.01
	15.04.01 T 15.04.01-01 13.B	A.01
	15.04.01 T 15.04.01-01 13.C	A.01
SR 3.03.04.02	15.04.01 T 15.04.01-01 13.A	A.01
	15.04.01 T 15.04.01-01 13.B	A.01
	15.04.01 T 15.04.01-01 13.C	A.01
SR 3.03.04.02 NOTE	15.04.01 T 15.04.01-01 13.A	A.01
	15.04.01 T 15.04.01-01 13.B	A.01
	15.04.01 T 15.04.01-01 13.C	A.01
SR 3.03.04.03A	15.04.01 T 15.04.01-01 13.A	A.01
SR 3.03.04.03B	15.04.01 T 15.04.01-01 13.B	A.01
SR 3.03.04.03C	15.04.01 T 15.04.01-01 13.C	A.01

Cross-Reference Report - NUREG-1431 Section 3.03.05

CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.03.05 T 15.03.05-01	FSAR	LA.01
15.03.05 T 15.03.05-01 09	LCO 3.03.04.b	A.01
15.03.05 T 15.03.05-01 10.A	LCO 3.03.04.a	A.01
15.03.05 T 15.03.05-01 10.B	LCO 3.03.04.c	A.01
15.03.05 T 15.03.05-03	FSAR	LA.02
	LCO 3.03.04	A.03
	LCO 3.03.04	A.04
15.03.05 T 15.03.05-03 04.A.I	LCO 3.03.04.b	A.02
	LCO 3.03.04.b	A.03
15.03.05 T 15.03.05-03 04.A.I**	LCO 3.03.04 COND A	L.01
	LCO 3.03.04 COND A RA A.1	L.01
15.03.05 T 15.03.05-03 04.A.I***	LCO 3.03.04 COND C	A.01
	LCO 3.03.04 COND C RA C.1	A.01
15.03.05 T 15.03.05-03 04.A.II	LCO 3.03.04.a	A.03
	LCO 3.03.04.a	A.02
15.03.05 T 15.03.05-03 04.A.II**	LCO 3.03.04 COND A	L.01
	LCO 3.03.04 COND A RA A.1	L.01
15.03.05 T 15.03.05-03 04.A.II***	LCO 3.03.04 COND C	A.01
	LCO 3.03.04 COND C RA C.1	A.01
15.03.05 T 15.03.05-03 04.A.II*****	N/A	A.05
15.03.05 T 15.03.05-03 04.B.I	LCO 3.03.04 COND D	M.01
	LCO 3.03.04 COND D RA D.1	M.01
	LCO 3.03.04.c	A.02
	LCO 3.03.04.c	A.03
15.03.05 T 15.03.05-03 04.B.I*	LCO 3.03.04 COND D RA D.1	M.01
15.03.05 T 15.03.05-03 04.B.I**	LCO 3.03.04 COND A	L.01
	LCO 3.03.04 COND A RA A.1	L.01
15.03.05 T 15.03.05-03 NOTE *	LCO 3.03.04 COND E	M.01
	LCO 3.03.04 COND E RA E.1	M.01
	LCO 3.03.04 COND E RA E.2	M.01
15.03.05 T 15.03.05-03 NOTE **	LCO 3.03.04 COND A	L.01
	LCO 3.03.04 COND A RA A.1	L.01

Cross-Reference Report - NUREG-1431 Section 3.03.05

CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.03.05 T 15.03.05-03 NOTE ***	LCO 3.03.04 COND NOTE	A.01
	LCO 3.03.04 COND C	A.01
	LCO 3.03.04 COND C RA C.1	A.01
15.03.05 T 15.03.05-03 NOTE *****	N/A	A.05
15.04.01 T 15.04.01-01 13.A	SR 3.03.04.01	A.01
	SR 3.03.04.02	A.01
	SR 3.03.04.02 NOTE	A.01
	SR 3.03.04.03A	A.01
15.04.01 T 15.04.01-01 13.B	SR 3.03.04.01	A.01
	SR 3.03.04.02	A.01
	SR 3.03.04.02 NOTE	A.01
	SR 3.03.04.03B	A.01
15.04.01 T 15.04.01-01 13.C	SR 3.03.04.01	A.01
	SR 3.03.04.02	A.01
	SR 3.03.04.02 NOTE	A.01
	SR 3.03.04.03C	A.01

Description of Changes - NUREG-1431 Section 3.03.05

13-Nov-99

DOC Number	DOC Text
A.01	In the conversion of Point Beach current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted which do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the Standard Technical Specifications, Westinghouse Plants, NUREG-1431, Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).

CTS:	ITS:
15.03.05 T 15.03.05-01 09	LCO 3.03.04.b
15.03.05 T 15.03.05-01 10.A	LCO 3.03.04.a
15.03.05 T 15.03.05-01 10.B	LCO 3.03.04.c
15.03.05 T 15.03.05-03 04.A.I***	LCO 3.03.04 COND C
	LCO 3.03.04 COND C RA C.1
15.03.05 T 15.03.05-03 04.A.II***	LCO 3.03.04 COND C
	LCO 3.03.04 COND C RA C.1
15.03.05 T 15.03.05-03 NOTE ***	LCO 3.03.04 COND NOTE
	LCO 3.03.04 COND C
	LCO 3.03.04 COND C RA C.1
15.04.01 T 15.04.01-01 13.A	SR 3.03.04.01
	SR 3.03.04.02
	SR 3.03.04.02 NOTE
	SR 3.03.04.03A
15.04.01 T 15.04.01-01 13.B	SR 3.03.04.01
	SR 3.03.04.02
	SR 3.03.04.02 NOTE
	SR 3.03.04.03B
15.04.01 T 15.04.01-01 13.C	SR 3.03.04.01
	SR 3.03.04.02
	SR 3.03.04.02 NOTE
	SR 3.03.04.03C

DOC Number	DOC Text
A.02	CTS Table 15.3.5-3, "Minimum Operable Channels" column is changed to "Required Channels". Per CTS LCO 15.3.5.c, if the number of operable channels for a particular subsystem is less than that required by the "Minimum Operable Channels" column of Table 15.3.5-3, operation shall be limited according to the requirements of the "Operator Action" column of the same Table. Furthermore, many of the items in Table 15.3.5-3 have a note associated with them in the "Minimum Operable Channels" column, that limits unit operation if the number of operable channels for that subsystem is one less than the total number of channels. Proposed ITS 3.3.4 combines these requirements by specifying the number of required channels for each function. The Conditions and associated Required Actions of ITS LCO 3.3.4 will provide required actions for inoperable channel(s). Therefore, instead of providing an operation limiting note applicable to the functions, that refers to the total number of channels for that function in another column, proposed ITS LCO 3.3.4 states the number of channels required for each function to meet OPERABILITY requirements, below which Required Actions are taken to mitigate the Conditions. **CTS:** / **ITS:** 15.03.05 T 15.03.05-03 04.A.I / LCO 3.03.04.b 15.03.05 T 15.03.05-03 04.A.II / LCO 3.03.04.a 15.03.05 T 15.03.05-03 04.B.I / LCO 3.03.04.c
A.03	CTS Table 15.3.5-3, "Permissible Bypass Conditions" column provides a place to list conditions where each trip function is allowed to be bypassed. There are no permissible bypass conditions listed for the Safety-Related Electrical Loads in CTS Table 15.3.5-3. This space has been utilized to specify the Applicable MODES under which these instruments are required OPERABLE. The MODES specified for each function are based on the safety analyses assumptions made for that function, or the diverse protection that function provides. **CTS:** / **ITS:** 15.03.05 T 15.03.05-03 / LCO 3.03.04 15.03.05 T 15.03.05-03 04.A.I / LCO 3.03.04.b 15.03.05 T 15.03.05-03 04.A.II / LCO 3.03.04.a 15.03.05 T 15.03.05-03 04.B.I / LCO 3.03.04.c
A.04	CTS Table 15.3.5-3, "Operator Actions if Conditions of Column 3 Cannot be Met", is moved from the Table and placed in the Actions section of ITS LCO 3.3.4. **CTS:** / **ITS:** 15.03.05 T 15.03.05-03 / LCO 3.03.04

Description of Changes - NUREG-1431 Section 3.03.05

13-Nov-99

DOC Number	DOC Text
A.05	CTS Table 15.3.5-3, Note ***** specifies use of the 3/bus specification for each A05 and A06 bus that has been modified to the 2 out of 3 logic for the loss of voltage protection function. Proposed ITS LCO 3.3.4 requires 3 operable channels per A05 and A06 bus loss of voltage protection function. This change is administrative as all A05 and A06 buses have been modified to the 2 out of 3 logic configuration for the loss of voltage protection function. Accordingly, deletion of this Note is acceptable, as the 2/bus specification no longer imposes any operational limitations.

CTS:	ITS:
15.03.05 T 15.03.05-03 04.A.II*****	N/A
15.03.05 T 15.03.05-03 NOTE *****	N/A

DOC Number	DOC Text
L.01	CTS Table 15.3.5-3, Note ** allows power operation to continue when a channel is determined to be inoperable, if the minimum number of operable channels is satisfied and the inoperable channel is placed in trip within 1 hour. This note is modified in the associated required actions of ITS LCO 3.3.4, Condition A. Required Actions A.1 requires an inoperable channel to be placed in the tripped condition within 6 hours. The 6 hour Completion Time is less restrictive, but is justified in WCAP-10271-P-A, Supplement 2.

CTS:	ITS:
15.03.05 T 15.03.05-03 04.A.I**	LCO 3.03.04 COND A
	LCO 3.03.04 COND A RA A.1
15.03.05 T 15.03.05-03 04.A.II**	LCO 3.03.04 COND A
	LCO 3.03.04 COND A RA A.1
15.03.05 T 15.03.05-03 04.B.I**	LCO 3.03.04 COND A
	LCO 3.03.04 COND A RA A.1
15.03.05 T 15.03.05-03 NOTE **	LCO 3.03.04 COND A
	LCO 3.03.04 COND A RA A.1

DOC Number	DOC Text
L.02	The addition of Note ## to CTS Table 15.3.5-3, items 4.a.i, 4.a.ii and 4.b.i will allow an inoperable channel to be bypassed for up to 4 hours for surveillance testing of other channels. This Note corresponds to ITS LCO 3.3.4, Required Action A.1, Note. Adopting this Note results in a relaxation in the requirement for an inoperable channel to be in the tripped condition, but is consistent with the guidance in WCAP-10271-P-A, Supplement 2, Rev. 1.

CTS:	ITS:
NEW	LCO 3.03.04 COND A NOTE

Description of Changes - NUREG-1431 Section 3.03.05

13-Nov-99

DOC Number	DOC Text
L.03	The Operator Actions of CTS Table 15.3.5-3, items 4.a.i and 4.a.ii, have been revised. Table 15.3.5-3, Note ***, requires the declaration of the associated standby emergency power supply inoperable for the affected bus and subsequent entry into the applicable LCO. Proposed ITS LCO 3.3.4, Condition B is entered with two or more inoperable LOP DG start and load sequence instrumentation channels per bus. Required Action B.1 allows 1 hour to restore all but one channel to OPERABLE status. If this required action and associated Completion Time are not met, Condition C is entered. Required Action C.1 requires the immediate entry into the applicable condition(s) and required action(s) for the associated DG made inoperable by LOP DG start and load sequence instrumentation. This change results in a relaxation of the current requirements, but is acceptable because the additional hour takes into account the low probability of an event requiring an LOP start occurring during this interval.
	CTS: NEW **ITS:** LCO 3.03.04 COND B LCO 3.03.04 COND B RA B.1
LA.01	The information in CTS Table 15.3.5-1, "Channel" column contains details of design which are not directly pertinent to describe the actual regulatory requirement. These details are not necessary to provide adequate protection of the public health and safety. This information has been moved to the FSAR. Changes to the FSAR will be controlled in accordance with the 10 CFR 50.59 process.
	CTS: 15.03.05 T 15.03.05-01 **ITS:** FSAR
LA.02	The information in CTS Table 15.3.5-3, "No. of Channels" and "No. of Channels to Trip" columns contain details of design which are not directly pertinent to describe the actual regulatory requirement. These details are not necessary to provide adequate protection of the public health and safety. This information has been moved to the FSAR. Changes to the FSAR will be controlled in accordance with the 10 CFR 50.59 process.
	CTS: 15.03.05 T 15.03.05-03 **ITS:** FSAR

DOC Number	DOC Text
M.01	CTS Table 15.3.5-3, item 4.b.i, 480 V Buses (B03, B04) - Loss of Voltage, requires the unit be in hot shutdown in 8 hours, if the minimum operable channels requirement cannot be met. This required action is modified by Note *, which requires the unit be in cold shutdown within 48 hours of the event, if the minimum conditions are not met within 24 hours after reaching hot shutdown. Proposed ITS LCO 3.3.4 Condition D is entered when two or more 480 V loss of voltage channels per bus are inoperable. Required Action D.1 requires the restoration of all but one of the channels within 1 hour. If this action cannot be completed in 1 hour, Condition E is entered, requiring the unit be in MODE 3 within 6 hours and MODE 5 in 36 hours. This results in additional restrictions on unit operation, but is a reasonable amount of time, based on operating experience to place the unit in the required conditions from full power in an orderly manner and without challenging unit systems.

CTS:	ITS:
15.03.05 T 15.03.05-03 04.B.I	LCO 3.03.04 COND D
	LCO 3.03.04 COND D RA D.1
15.03.05 T 15.03.05-03 04.B.I*	LCO 3.03.04 COND D RA D.1
15.03.05 T 15.03.05-03 NOTE *	LCO 3.03.04 COND E
	LCO 3.03.04 COND E RA E.1
	LCO 3.03.04 COND E RA E.2

15.3.5 INSTRUMENTATION SYSTEM

Operational Safety Instrumentation

Applicability: Applies to plant instrumentation systems.

Objectives: To provide for automatic initiation of the Engineered Safety Features in the event that principal process variable limits are exceeded, and to delineate the conditions of the plant instrumentation and safety circuits necessary to ensure reactor safety.

Specification:

< See LCO 3.3.2 >

A. The Engineered Safety Features initiation instrumentation setting limits shall be as stated in Table 15.3.5-1.

B. For on-line testing or in the event of a sub-system instrumentation channel failure, plant operation at rated power shall be permitted to continue in accordance with Tables 15.3.5-2 through 15.3.5-4 < See LCOs 3.3.1 and 3.3.2 >

C. In the event the number of channels of a particular sub-system in service falls below the limits given in the column entitled Minimum Operable Channels, operation shall be limited according to the requirement shown in Tables 15.3.5-2 through 15.3.5-4, Operator Action when minimum operable channels unavailable. A.2

D. The post-accident monitoring instrumentation channels in Table 15.3.5-5 shall be operable. In the event the number of channels in a particular sub-system falls below the minimum number of operable channels given in Column 2, operation and subsequent operator action shall be in accordance with Column 3. This specification is not applicable in the cold or refueling shutdown conditions. < See LCO 3.3.3 >

Basis: Instrumentation has been provided to sense accident conditions and to initiate operation of the Engineered Safety Features(1) < See LCO 3.3.2 >

TABLE 15.3 (Continued)
(PAGE 2 OF 2)

LA.1

NO.	FUNCTIONAL UNIT	CHANNEL	SETTING LIMIT
9.	Degraded Voltage (4.16 KV) (A05, A06)	Disconnection of affected bus from offsite power	≥ 3937 volts Time delay: < 54 seconds without SI signal present. < 6.47 seconds with SI signal present.
10.	Loss of Voltage		
	a. 4.16 KV (A05, A06)	Disconnection of affected bus from offsite power Start Diesel	a. ≥ 3156 volts Time delay: 0.7-1.0 sec
	b. 480 V (B03, B04)	Load shedding	b. 256 volts ±3% Time delay: ≤0.5 sec

TABLE 1 -3 (continued)
ENGINEERED FETY FEATURES

NO.	FUNCTIONAL UNIT	1 ~~NO. OF CHANNELS~~	2 ~~NO. OF CHANNELS TO TRIP~~	3 MINIMUM OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	CONDITIONS AND REQUIRED ACTIONS: OPERATOR ACTION IF CONDITIONS OF COLUMN 3 CANNOT BE MET
b.	Start Turbine-Driven Pump					
i.	Undervoltage on 4KV Buses (A01 & A02)	2/each bus	1/each bus	1/each bus		Be in hot shutdown in 8 hours*
ii.	Low Low Steam Gen. Water Level	3/SG	2/each SG	2/SG**		Be in hot shutdown in 8 hours*
4.	SAFETY-RELATED ELECTRICAL LOADS					
a.	4.16KV Buses (A05, A06)					
i.	Degraded Voltage	~~3/bus~~	~~2/bus~~	3 → 2/bus ##	1,2,3,4, #	... Insert A
ii.	Loss of Voltage	~~2/bus~~ ~~3/bus~~	~~1/bus~~ ~~2/bus~~	3 → 2/bus ##	1,2,3,4, #	...
b.	480V Buses (B03, B04)					
i.	Loss of Voltage	~~3/bus~~	~~2/bus~~	3 → 2/bus ##	1,2,3,4, #	Insert B: Be in hot shutdown in 8 hours*

< See LCO 3.3.2 >

* If minimum conditions are not met within 24 hours after reaching hot shutdown, the unit shall be in cold shutdown within 48 hours of the event causing the unit shutdown.

~~** If a channel is determined to be inoperable, resulting in one less than the total number of channels being operable, power operation may continue if the following conditions are met:~~
~~1. The minimum number of operable channels is still satisfied.~~
~~2. The affected channel is placed in trip within 1 hour.~~

*** Declare the associated standby emergency power supply inoperable for the affected bus. The applicable Limiting Condition for Operation (LCO) shall be entered. Separate LCOs may be entered for the Degraded Voltage and Loss of Voltage functions.

**** Both switches must be activated simultaneously. < See LCO 3.3.2 >

~~***** Use the 3/bus specification for each A05 and A06 bus that has been modified to the 2 out of 3 logic for the loss of voltage protection function.~~

When associated DG is required to be operable by LCO 3.8.2, "AC Sources-Shutdown."

The inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels.

INSERT A

Restore all but one inoperable channel to OPERABLE status within 1 hour when two or more channels are inoperable, AND place one inoperable channel in the tripped condition within 6 hours, OR immediately enter applicable Condition(s) and Required Action(s) for the associated DG made inoperable by LOP DG start and load sequence instrumentation.

Insert B

Restore all but one inoperable channel to OPERABLE status within 1 hour, when two or more channels are inoperable, AND place one inoperable channel in the tripped condition within 6 hours, OR place the unit in MODE 3 in the next 6 hours and in MODE 5 in 36 hours.

A.1

TABLE 15.4 (continued)

NO.	CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	PLANT CONDITIONS WHEN REQUIRED	
9.	Steam Generator Flow Mismatch	S(22)	R	Q(1)	ALL	< See LCO 3.3.1 >
10.	Steam Generator Pressure	S(16)	R	Q(1)	ALL	< See LCO 3.3.2 >
11.	4KV Bus Undervoltage (A01 & A02)					
	-AFW pump actuation	-	R	M(1)	ALL	
	-Reactor Protection actuation	-	R	M(1,2)	ALL	< See LCO 3.3.1 >
12.	4KV Bus Underfrequency (A01 & A02)					
	-to Reactor Coolant Pump trip	-	R	-	ALL	
13.	Safeguards Bus Voltage					
	-Loss of 4KV	S	R	M	ALL	
	-Degraded 4KV	S	R	M	ALL	
	-Loss of 480V	S	R	M	ALL	
14.	120 Vac Instrument Buses	W(6)	-	-	ALL	< See Section 3.8 >
15.	Reactor Trip Signal From Turbine					
	-Turbine Autostop	-	-	M(1)	ALL	
	-Turbine Stop Valve	-	-	M(1)	ALL	< See LCO 3.3.1 >
16.	Reactor Trip Signal From SI	-	-	M(1)	ALL	
17.	Feedwater Isolation on SI					
	-MFP Trip on Safety Injection	-	-	R	ALL	< See LCO 3.3.2 >
	-MFRV Shutting on Safety Injection	-	-	R	ALL	
18.	Accumulator Level and Pressure	S	R	-	ALL	< See Section 3.5 >
19.	Analog Rod Position	S(8,22)	R	-	ALL	< See Section 3.1 >
	-with step counters	S(22)	-	-	ALL	
	-Monitoring by On-Line Computer	(18)	-	-	PWR, HOT S/D	

A.3

1,2,3,4, When associated DG is required to be operable by LCO 3.8.2, "AC Sources-Shutdown."

Justification For Deviations - NUREG-1431 Section 3.03.05

13-Nov-99

JFD Number	JFD Text
01	NUREG 1431 LCO 3.3.4, Remote Shutdown System, has not been adopted as part of Point Beach's conversion to the Improved Technical Specifications. The Point Beach CTS does not contain any Specifications which would require operability of instrumentation or controls associated with the capability to remotely shutdown the units. By not adopting this specification, subsequent LCOs are renumbered.

ITS:	NUREG:
B 3.03.04	B 3.03.05
SR 3.03.04.01	SR 3.03.05.01
SR 3.03.04.02	SR 3.03.05.02
SR 3.03.04.03A	SR 3.03.05.03A
SR 3.03.04.03B	SR 3.03.05.03B

02	The brackets have been removed and the proper plant specific information has been provided. In some instances, even though the information was designated as being site specific information in the LCO (bracketed), the corresponding Bases information was not bracketed. These cases are self evident, corresponding to the bracketed information in the LCO, and have had the appropriate site specific information provided.

ITS:	NUREG:
B 3.03.04	B 3.03.05
LCO 3.03.04.a	LCO 3.03.05
LCO 3.03.04.b	LCO 3.03.05
SR 3.03.04.01	SR 3.03.05.01
SR 3.03.04.02	SR 3.03.05.02
SR 3.03.04.03	SR 3.03.05.03
SR 3.03.04.03A	SR 3.03.05.03A
SR 3.03.04.03B	SR 3.03.05.03B

JFD Number	JFD Text
03	LCO 3.3.4 has been modified to reflect the instrumentation utilized at Point Beach to start the DGs on LOP and sequence the loads onto the safety-related buses. An undervoltage condition detected on either 4.16 kV bus will start the associated DG. During a loss of voltage to the safety-related 480 V buses, protective relays initiate load shedding and block automatic SI load sequencing until voltage returns to the buses. This function is necessary to prevent overloading of the DGs. Additionally, Conditions D and E have been adopted to provide actions in the event of inoperable 480 V loss of voltage channels. Condition D requires the restoration of all but one inoperable channel within 1 hour. The Completion Time of 1 hour for restoring all but one inoperable channels should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start and load sequence during this interval. Condition E is entered if the required action and associated completion time of Condition A (for the 480 V loss of voltage function) or Condition D are not met. Required Action E.1 requires the unit be placed in MODE 3 in 6 hours and MODE 5 in 36 hours. The Completion Times are reasonable, based on operating experience, to reach the required unit condition from full power conditions in an orderly manner and without challenging unit systems.

ITS:	NUREG:
B 3.03.04	B 3.03.05
LCO 3.03.04 COND B	LCO 3.03.05 COND B
LCO 3.03.04 COND C	LCO 3.03.05 COND C
LCO 3.03.04 COND D	N/A
LCO 3.03.04 COND D RA D.1	N/A
LCO 3.03.04 COND E	N/A
LCO 3.03.04 COND E RA E.1	N/A
LCO 3.03.04 COND E RA E.2	N/A
LCO 3.03.04.a	LCO 3.03.05
LCO 3.03.04.b	LCO 3.03.05
LCO 3.03.04.c	N/A
SR 3.03.04.01	N/A
SR 3.03.04.02	N/A
SR 3.03.04.03C	N/A

Justification For Deviations - NUREG-1431 Section 3.03.05

13-Nov-99

JFD Number	JFD Text
04	NUREG-1431 nomenclature of LCO 3.3.5, "LOP DG Start Instrumentation" has been modified to "LOP DG Start and Load Sequence Instrumentation" within ITS LCO 3.3.4, to more accurately reflect the functions the 4.16 kV Loss of Voltage, 4.16 kV Degraded Voltage and 480 V Loss of Voltage instrumentation perform at Point Beach. **ITS:** B 3.03.04 — LCO 3.03.04.b **NUREG:** B 3.03.05 — LCO 3.03.05
05	LCO 3.3.4 Required Action A.1 requires placing an inoperable channel in trip within 6 hours. The Bases discussion of Required Action A.1, states, "With a channel in trip, the LOP DG start instrumentation channels are configured to provide a one-out-of-three logic to initiate a trip..." This statement has been modified to reflect the fact that with one of the three channels in trip, the instrument channels are actually in a "one-out-of-two" logic configuration to initiate a trip. **ITS:** B 3.03.04 **NUREG:** B 3.03.05
06	References to "Trip Setpoint" within LCO 3.3.4 Bases are being eliminated. The setpoint methodology at Point Beach utilizes Allowable Values derived from the analytical limits contained in the safety analysis. Where analytical limits do not exist for a given function, the Allowable Values are based on a plant specific evaluation of the functional requirement for the instrument channel. **ITS:** B 3.03.04 **NUREG:** B 3.03.05
07	ITS LCO 3.3.4, references to "diesel generator (DG)" have been changed to "standby emergency power source," to be consistent with current Point Beach nomenclature. **ITS:** B 3.03.04 — LCO 3.03.04 COND C RA C.1 **NUREG:** B 3.03.05 — LCO 3.03.05 COND C RA C.1
08	ITS LCO 3.3.4 Bases discussion of LOP start on loss of voltage or degraded voltage "in the switchyard" have been modified to reflect Point Beach design. The LOP start is generated on a loss of voltage or degraded voltage condition on the safeguards bus. **ITS:** B 3.03.04 **NUREG:** B 3.03.05

Justification For Deviations - NUREG-1431 Section 3.03.05

13-Nov-99

JFD Number	JFD Text
09	The ITS definition of TADOT has been modified to not include verification of the setpoint. Therefore ITS SR 3.3.4.2 Bases have been modified to reflect this change. **ITS:** B 3.03.04 **NUREG:** B 3.03.05

LOP DG Start Instrumentation and Load Sequence 3.3.5

3.3 INSTRUMENTATION

3.3.5 Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation

LCO 3.3.5

[Three] channels per bus of th e loss of voltage Function ~~and~~ [three] channels per bus of the degraded voltage Function shall be OPERABLE.

Replace with Insert 3.3.5-1.

APPLICABILITY: MODES 1, 2, 3, and 4.
When associated DG is required to be OPERABLE by LCO 3.8.2, "AC Sources – Shutdown."

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one channel per bus inoperable.	A.1 --------NOTE--------- The inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels. ---------- Place channel in trip.	6 hours
B. ~~One or more Functions with~~ two or more channels per bus inoperable.	B.1 Restore all but one channel to OPERABLE status.	1 hour

4.16 kV loss of voltage or 4.16 kV degraded voltage

(continued)

LOP DG Start Instrumentation 3.3.5 and Load Sequence

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A for 4.16 kV Functions or Condition B not met.	C.1 Enter applicable Condition(s) and Required Action(s) for the associated DG standby emergency power source made inoperable by LOP DG start instrumentation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.2	Perform TADOT.	31 days [31 days]

(continued)

D. Two or more 480 V loss of voltage channels per bus inoperable.	D.1	Restore all but one channel to OPERABLE status.	1 hour
E. Required Action and associated Completion Time of Condition A for 480 V loss of voltage Function or Condition D not met.	E.1	Be in MODE 3.	6 hours
	AND		
	E.2	Be in MODE 5.	36 hours

4 → and Load Sequence

1 → 4

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.5.13	Perform CHANNEL CALIBRATION with ~~[setpoint~~ Allowable Value~~] [Trip Setpoint and Allowable Value]~~ as follows:	[18] months

1 → 4 (SR 3.3.5.13); 2 (Allowable Value); 18 ← 2 (months)

a. Loss of voltage Allowable Value ≥ [2912] V with a time delay of [0.8] ± [ ] second.

Loss of voltage Trip Setpoint ≥ [2975] V with a time delay of [0.8] ± [ ] second.

b. Degraded voltage Allowable Value ≥ [3683] V with a time delay of [20] ± [ ] seconds.

Degraded voltage Trip Setpoint ≥ [3746] V with a time delay of [20] ± [ ] seconds.

a. 4.16 kV Loss of voltage Allowable Value ≥ 3156 V with a time delay of ≥ 0.7 seconds and ≤ 1.0 second.

b. 4.16 kV Degraded voltage Allowable Value ≥ 3937 V with a time delay of < 6.47 seconds (with SI signal present) and < 54 seconds (without SI signal present.)

2

c. 480 V Loss of voltage Allowable Value 256 V ± 3% with a time delay of ≤ 0.5 seconds.

3

LCO 3.3.5 NUREG Mark up Inserts

Insert 3.3.5-1:

LCO 3.3.4 The following LOP DG Start and Load Sequence Instrumentation shall be OPERABLE:

a. Three channels per bus of the 4.16 kV loss of voltage Function,

b. Three channels per bus of the 4.16 kV degraded voltage Function, and

c. Three channels per bus of the 480 V loss of voltage Function.

2

3

3

4 → and Load Sequence

1 → 4

B 3.3 INSTRUMENTATION

B 3.3.5 Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation

1 → 4 4 → and Load Sequence 8 on the safeguards bus

BASES

BACKGROUND

The DGs provide a source of emergency power when offsite power is either unavailable or is insufficiently stable to allow safe unit operation. Undervoltage protection will generate an LOP start if a loss of voltage or degraded voltage condition occurs in the switchyard. There are two LOP start signals, one for each 4.16 kV vital bus train 3

Three undervoltage relays with inverse time characteristics are provided on each 4160 Class 1E instrument bus for detecting a sustained degraded voltage condition or a loss of bus voltage. The relays are combined in a two-out-of-three logic to generate an LOP signal if the voltage is below 75% for a short time or below 90% for a long time. The LOP start actuation is described in FSAR, Section 8.3 (Ref. 1).

8.8 2

During a loss of voltage to the safety-related 480 V buses, protective relays initiate load shedding and block automatic SI load sequencing until voltage returns to the buses. This function is necessary to prevent overloading the DGs.

Three undervoltage relays are provided on each safety-related 480 V bus for detecting a loss of voltage. The relays arranged in a two-out-of-e logic to generate load sequencing signals for the associated 480 V bus.

3

6

~~Trip Setpoints and~~ Allowable Values

Allowable Values 6

The Trip Setpoints used in the relays are based on the analytical limits presented in FSAR, Chapter 15 (Ref. 2). The selection of these Trip Setpoints is such that adequate protection is provided when all sensor and processing time delays are taken into account. 14

6 → Allowable Values

The actual nominal Trip Setpoint entered into the relays is normally still more conservative than that required by the Allowable Value. If the measured setpoint does not exceed the Allowable Value, the relay is considered OPERABLE.

Setpoints adjusted in accordance with the Allowable Value ensure that the consequences of accidents will be acceptable, providing the unit is operated from within the LCOs at the onset of the accident and that the equipment functions as designed.

6

Allowable Values ~~and/or Trip Setpoints~~ are specified for each Function in the LCO. Nominal Trip Setpoints are also specified in the unit specific setpoint calculations. The nominal setpoints are selected to ensure that the setpoint measured by the surveillance procedure does not exceed the Allowable Value if the relay is performing as required. If the measured setpoint does not exceed the Allowable Value, the relay is considered OPERABLE. Operation with a Trip Setpoint less conservative than the nominal Trip Setpoint, but within the Allowable Value, is acceptable provided that

1 → 4

BASES

BACKGROUND (continued)

operation and testing is consistent with the assumptions of the unit specific setpoint calculation. Each Allowable Value ~~and/or Trip Setpoint~~ specified is more conservative than the analytical limit assumed in the transient and accident analyses in order to account for instrument uncertainties appropriate to the trip function. ~~These uncertainties are defined in the "Unit Specific RTS/ESFAS Setpoint Methodology Study" (Ref. 3).~~

APPLICABLE SAFETY ANALYSES

The LOP DG start instrumentation is required for the Engineered Safety Features (ESF) Systems to function in any accident with a loss of offsite power. Its design basis is that of the ESF Actuation System (ESFAS).

Accident analyses credit the loading of the DG based on the loss of offsite power during a loss of coolant accident (LOCA). The actual DG start has historically been associated with the ESFAS actuation. The DG loading has been included in the delay time associated with each safety system component requiring DG supplied power following a loss of offsite power. The analyses assume a non - mechanistic DG loading, which does not explicitly account for each individual component of loss of power detection and subsequent actions.

The required channels of LOP DG start instrumentation, in conjunction with the ESF systems powered from the DGs, provide unit protection in the event of any of the analyzed accidents discussed in Reference 2, in which a loss of offsite power is assumed.

The delay times assumed in the safety analysis for the ESF equipment include the 10 second DG start delay, and the appropriate sequencing delay, if applicable. The response times for ESFAS actuated equipment in LCO 3.3.2, "Engineered Safety Feature Actuation System (ESFAS) Instrumentation," include the appropriate DG loading and sequencing delay.

The LOP DG start instrumentation channels satisfy Criterion 3 of the NRC Policy Statement.

LCO

The LCO for LOP DG start instrumentation requires that [three] channels per bus of both the loss of voltage and degraded voltage Functions shall be OPERABLE in MODES 1, 2, 3, and 4 when the LOP DG start instrumentation supports safety systems associated with the ESFAS. In MODES 5 and 6,

BASES

LCO (continued)

the [three] three channels must be OPERABLE whenever the as sociated DG is required to be OPERABLE to ensure that the automatic start of the DG is available when needed. Loss of the LOP DG Start and Load Sequence Instrumentation Function could result in the delay of safety systems initiation when required. This could lead to unacceptable consequences during accidents. During the loss of offsite power the DG powers the motor driven auxiliary feedwater pumps. Failure of these pumps to start would leave only one turbine driven pump, as well as an increased potential for a loss of decay heat removal through the secondary system.

APPLICABILITY

The LOP DG Start and Load Sequence Instrumentation Functions are required in MODES 1, 2, 3, and 4 because ESF Functions are designed to provide protection in these MODES. Actuation in MODE 5 or 6 is required whenever the required DG must be OPERABLE so that it can perform its function on an LOP or degraded power to the vital bus.

ACTIONS

In the event a channel's Trip Setpoint is found nonconservative with respect to the Allowable Value, or the channel is found inoperable, then the function that channel provides must be declared inoperable and the LCO Condition entered for the particular protection function affected.

Because the required channels are specified on a per bus basis, the Condition may be enter ed separately for each bus as appropriate.

A Note has been added in the ACTIONS to clarify the application of Completion Time rules. The Conditions of this Specification may be entered independently for each Function listed in the LCO. The Completion Time(s) of the inoperable channel(s) of a Function will be tracked separately for each Function starting from the time the Condition was entered for that Function.

A.1

Condition A applies to the LOP DG start and load sequence Function with one loss of voltage or degraded voltage channel per bus inoperable.

If one channel is inoperable, Required Action A.1 requires that channel to be placed in trip within 6 hours. With a channel in trip, the LOP DG start and load sequence instrumentation channels

BASES

ACTIONS (continued)

are configured to provide a one-out-of-three logic to initiate a trip of the incoming offsite power.

A Note is added to allow bypassing an inoperable channel for up to 4 hours for surveillance testing of other channels. This allowance is made where bypassing the channel does not cause an actuation and where at least two other channels are monitoring that parameter.

The specified Completion Time and time allowed for bypassing one channel are reasonable considering the Function remains fully OPERABLE on every bus and the low probability of an event occurring during these intervals.

B.1

Condition B applies when more than one loss of voltage or more than one degraded voltage channel on a single bus is inoperable.

Required Action B.1 requires restoring all but one channe l to OPERABLE status. The 1 hour Completion Time should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start occurring during this interval.

C.1

Condition C applies when the Required Action and associated Completion Time for Condition A or B are not met.

In these circumstances the Conditions specified in LCO 3.8.1, "AC Sources - Operating," or LCO 3.8.2, "AC Sources - Shutdown," for the DG made inoperable by failure of the LOP DG start instrumentation are required to be entered immediately. The actions of those LCOs provide for adequate compensatory actions to assure unit safety.

SURVEILLANCE REQUIREMENTS

SR 3.3.5.1

Performance of the CHANNEL CHECK once every 12 hours ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read

Insert D.1

Condition D applies when more than one 480 V loss of voltage channel on a single bus is inoperable.

Required Action D.1 requires restoring all but one channel to OPERABLE status. The 1 hour Completion Time should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start and load sequence during this interval.

Insert E.1 and E.2

If the Required Action and associated Completion Time of Condition A for the 480 V loss of voltage Function or Condition D are not met, the unit must be placed in a MODE in which the LCO does not apply. This is done by placing the unit in at least MODE 3 in 6 hours and in MODE 5 in 36 hours. The Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

BASES

SURVEILLANCE REQUIREMENTS (continued)

approximately the same value. Significant deviations between the two instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the unit staff, based on a combination of the channel instrument uncertainties, including 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 is based on operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels.

SR 3.3.5.2

SR 3.3.5.2 is the performance of a TADO T. This test is performed every [31 days]. The test checks trip devices that provide actuation signals directly, bypassing the analog process control equipment. ~~For these tests, the relay Trip Setpoints are verified and adjusted as necessary.~~ The Frequency is based on the known reliability of the relays and controls and the multichannel redundancy available, and has been shown to be acceptable through operating experience.

SR 3.3.5.3

SR 3.3.5.3 is the performance of a CHANNEL CALIBRATION.

The setpoints, as well as the response to a loss of voltage and a degraded voltage test, shall include a single point verification that the trip occurs within the required time delay, as shown in Reference 1.

A CHANNEL CALIBRATION is performed eve ry [18] months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

BASES

SURVEILLANCE REQUIREMENTS (continued)

The Frequency of [18] months is based on operating experience and consistency with the typical industry refueling cycle and is justified by the assumption of an [18] month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

REFERENCES

1. FSAR, Section [8.3].
2. FSAR, Chapter [15].
3. ~~Unit Specific RTS/ESFAS Setpoint Methodology Study.~~

No Significant Hazards Considerations - NUREG-1431 Section 3.03.05

13-Nov-99

NSHC Number	NSHC Text
A	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change involves reformatting and rewording of the current Technical Specifications. The reformatting and rewording process involves no technical changes to existing requirements. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change will not significantly reduce the margin of safety because it has no impact on any safety analysis assumptions. This change is administrative. As such, there is no technical change to the requirements and, therefore, there is no reduction in the margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.03.05

13-Nov-99

NSHC Number	NSHC Text
L.01	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. This change increases the time permitted to place an inoperable LOP DG start and load sequence Function channel in trip, and allows unlimited operation in that condition. Placing the channel in trip results in a partial trip condition, and the increased permitted time to place the inoperable channel in trip is consistent with WCAP-10271-P-A, Supplement 2, Rev. 1. Therefore, this change does not involve an increase in the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. This change does not introduce any new modes of operation. This change increases the time permitted to place an inoperable LOP DG start and load sequence Function channel in trip, and allows unlimited operation in that condition. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created. 3. Does this change involve a significant reduction in a margin of safety? This change only extends the allowed time to place an inoperable LOP DG start and load sequence Function channel in trip, and allows unlimited operation in that condition. The extended time is consistent with WCAP-10271-P-A, Supplement 2, Rev. 1. Therefore, this change does not involve a reduction in a margin of safety.

NSHC Number	NSHC Text
L.02	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1.Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed changes to allowed out-of-service times and surveillance intervals are supported by equipment reliability studies that demonstrate LOP DG start and load sequence Function reliability and availability are not reduced. The determination that the results of the proposed changes are within all acceptable criteria was established in the SER(s) prepared for WCAP-10271, WCAP 10271 Supplement 1, WCAP-10271 Supplement 2, and WCAP-10271 Supplement 2, Revision 1 issued by letters dated February 21, 1985, February 22, 1989, and April 30, 1990. Implementation of the proposed changes is expected to result in an acceptable increase in total LOP DG start and load sequence Function yearly unavailability. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed changes to allowed out-of-service times and surveillance intervals do not result in a change in the manner in which the LOP DG start and load sequence Functions provide plant protection. No change is being made which alters the functioning of LOP DG start and load sequence instrumentation. Therefore, the proposed changes do not create the possibility of a new or different kind of accident. The proposed changes to out-of-service times and surveillance intervals do not involve hardware changes. 3. Does this change involve a significant reduction in a margin of safety? The proposed changes to out-of-service times and surveillance intervals do not alter the manner in which safety limits, limiting safety system setpoints or limiting conditions for operation are determined. Implementation of the proposed changes is expected to result in an overall improvement in safety due to fewer inadvertent LOP DG starts, and higher quality repairs leading to improved equipment reliability resulting from longer repair times. The foregoing analysis demonstrated that these proposed changes to out-of-service times and surveillance intervals do not involve a significant reduction in a margin of safety and that any reduction in a margin of safety will be offset by the overall improvement in safety resulting from the proposed changes.

NSHC Number	NSHC Text
L.03	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? This change does not result in any equipment or hardware changes. The allowable restoration time for inoperable safety-related 4.16 kV or 480 V undervoltage Functions is not the initiator for any analyzed event. The proposed change extends the allowable outage time by one hour. During this increased time, the consequences of an event are the same as the consequences of an event occurring during the currently allowed restoration time. Therefore, the proposed change does not significantly increase the probability or consequences of an accident previously evaluated during this time period. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not involve any physical alteration of plant systems, structures or components, nor does it alter parameters governing normal plant operation. The proposed change does not introduce a new mode of operation. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created. 3. Does this change involve a significant reduction in a margin of safety? Extending the allowable outage time of the safety-related 4.16 kV and 480 V undervoltage Functions by one hour is reasonable considering the low probability of an event LOP DG start during this interval. Accordingly, the proposed change does not involve a significant reduction in a margin of safety.

NSHC Number	NSHC Text
LA	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change relocates requirements from the Technical Specifications to the Bases, FSAR, or other plant controlled documents. The Bases and FSAR will be maintained using the provisions of 10 CFR 50.59. In addition to 10 CFR 50.59 provisions, the Technical Specifications Bases are subject to the change process in the Administrative Controls Chapter of the ITS. Plant procedures and other plant controlled documents are subject to controls imposed by plant administrative procedures, which endorse applicable regulations and standards. Changes to the Bases, FSAR, or other plant controlled documents will be evaluated in accordance with the requirements of the Bases Control Program in Chapter 5.0 of the ITS, 10 CFR 50.59, or plant administrative processes. Therefore, no increase in the probability or consequences of an accident previously evaluated will be allowed. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any different requirements and adequate control of the information will be maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change will not reduce a margin of safety because it has no impact on any safety analysis assumptions. In addition, the requirements to be moved from the Technical Specifications to the Bases, FSAR, or other plant controlled documents are as they currently exist. Future changes to the requirements in the Bases, FSAR, or other plant controlled documents will be evaluated in accordance with the requirements of 10 CFR 50.59, the Bases Control Program in Chapter 5.0 of the ITS, or the applicable plant process and no reduction in a margin of safety will be allowed.

NSHC Number	NSHC Text
M	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change provides more restrictive requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter the assumptions relative to the mitigation of an accident or transient event. These more restrictive requirements continue to ensure process variables, structures, systems and components are maintained consistent with the safety analyses. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with assumptions made in the safety analysis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The imposition of more restrictive requirements either has no affect on or increases the margin of safety. Each change is providing additional restrictions to enhance plant safety. These changes are consistent with the safety analysis. Therefore, this change does not involve a reduction in a margin of safety.

3.3 INSTRUMENTATION

3.3.4 Loss of Power (LOP) Diesel Generator (DG) Start and Load Sequence Instrumentation

LCO 3.3.4 The following LOP DG Start and Load Sequence Instrumentation shall be OPERABLE:

a. Three channels per bus of the 4.16 kV loss of voltage Function,

b. Three channels per bus of the 4.16 kV degraded voltage Function, and

c. Three channels per bus of the 480 V loss of voltage Function.

APPLICABILITY: MODES 1, 2, 3, and 4.
When associated DG is required to be OPERABLE by LCO 3.8.2, "AC Sources - Shutdown."

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one channel per bus inoperable.	A.1 --------NOTE--------- The inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels. ---------- Place channel in trip.	6 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. Two or more 4.16 kV loss of voltage or 4.16 kV degraded voltage channels per bus inoperable.	B.1	Restore all but one channel to OPERABLE status.	1 hour
C. Required Action and associated Completion Time of Condition A for 4.16 kV Functions or Condition B not met.	C.1	Enter applicable Condition(s) and Required Action(s) for the associated standby emergency power source made inoperable by LOP DG start instrumentation.	Immediately
D. Two or more 480 V loss of voltage channels per bus inoperable.	D.1	Restore all but one channel to OPERABLE status.	1 hour
E. Required Action and associated Completion Time of Condition A for 480 V loss of voltage Function or Condition D not met.	E.1	Be in MODE 3.	6 hours
	AND		
	E.2	Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.4.1	Perform CHANNEL CHECK.	12 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.4.2	Perform TADOT.	31 days
SR 3.3.4.3	Perform CHANNEL CALIBRATION with Allowable Value as follows: a. 4.16 kV loss of voltage Allowable Value $\geq$ 3156 V with a time delay of $\geq$ 0.7 seconds and $\leq$ 1.0 second. b. 4.16 kV degraded voltage Allowable Value $\geq$ 3937 V with a time delay of < 6.47 seconds (with SI signal present) and < 54 seconds (without SI signal present.) c. 480 V loss of voltage Allowable Value 256 V $\pm$ 3% with a time delay of $\leq$ 0.5 seconds.	18 months

B 3.3 INSTRUMENTATION

B 3.3.4 Loss of Power (LOP) Diesel Generator (DG) Start and Load Sequence Instrumentation

BASES

BACKGROUND

The DGs provide a source of emergency power when offsite power is either unavailable or is insufficiently stable to allow safe unit operation. Undervoltage protection will generate an LOP start if a loss of voltage or degraded voltage condition occurs on the safeguards bus. There are two LOP start signals, one for each train.

Three undervoltage relays with inverse time c haracteristics are provided on each 4160 Class 1E instrument bus for detecting a sustained degraded voltage condition or a loss of bus voltage. The relays are combined in a two-out-of-three logic to generate an LOP signal if the voltage is below 75% for a short time or below 90% for a long time. The LOP start actuation is described in FSAR, Section 8.8 (Ref. 1).

During a loss of voltage to the safety-related 480 V buses, protective relays initiate load shedding and block automatic SI load sequencing until voltage returns to the buses. This function is necessary to prevent overloading the DGs.

Three undervoltage relays are provided on each safety-related 480 V bus for detecting a loss of voltage. The relays are arranged in a two-out-of-three logic to generate load sequencing signals for the associated 480 V bus.

Allowable Values

The Allowable Values used in the relays are based on the analytical limits presented in FSAR, Chapter 14 (Ref. 2). The selection of these Allowable Values is such that adequate protection is provided when all sensor and processing time delays are taken into account.

The actual nominal Trip Setpoint entered into the relays is normally still more conservative than that required by the Allowable Value. If the measured setpoint does not exceed the Allowable Value, the relay is considered OPERABLE.

Setpoints adjusted in accordance with the Allowable Value ensure that the consequences of accidents will be acceptable, providing the unit is operated from within the LCOs at the

BASES

BACKGROUND (continued)

onset of the accident and that the equipment functions as designed. Allowable Values are specified for each Function in the LCO. Nominal Trip Setpoints are also specified in the unit specific setpoint calculations. The nominal setpoints are selected to ensure that the setpoint measured by the surveillance procedure does not exceed the Allowable Value if the relay is performing as required. If the measured setpoint does not exceed the Allowable Value, the relay is considered OPERABLE. Operation with a Trip Setpoint less conservative than the nominal Trip Setpoint, but within the Allowable Value, is acceptable provided that operation and testing is consistent with the assumptions of the unit specific setpoint calculation. Each Allowable Value specified is more conservative than the analytical limit assumed in the transient and accident analyses in order to account for instrument uncertainties appropriate to the trip function.

APPLICABLE SAFETY ANALYSES

The LOP DG start and load sequence instrumentation is required for the Engineered Safety Features (ESF) Systems to function in any accident with a loss of offsite power. Its design basis is that of the ESF Actuation System (ESFAS).

Accident analyses credit the loading of the DG based on the loss of offsite power during a loss of coolant accident (LOCA). The actual DG start has historically been associated with the ESFAS actuation. The DG loading has been included in the delay time associated with each safety system component requiring DG supplied power following a loss of offsite power. The analyses assume a non-mechanistic DG loading, which does not explicitly account for each individual component of loss of power detection and subsequent actions.

The required channels of LOP DG start and load sequence instrumentation, in conjunction with the ESF systems powered from the DGs, provide unit protection in the event of any of the analyzed accidents discussed in Reference 2, in which a loss of offsite power is assumed.

The delay times assumed in the safety analysis for the ESF equipment include the 10 second DG start delay, and the appropriate sequencing delay, if applicable. The response times for ESFAS actuated equipment in LCO 3.3.2, "Engineered

BASES

APPLICABLE SAFETY ANALYSES (continued)

Safety Feature Actuation System (ES FAS) Instrumentation." include the appropriate DG loading and sequencing delay.

The LOP DG start and load sequence instrumentation channels satisfy Criterion 3 of the NRC Policy Statement.

LCO

The LCO for LOP DG start and load sequence instrumentatio n requires that three channels per bus of the 480 V loss of voltage Function and three channels per bus of the 4.16 kV loss of voltage and degraded voltage Functions shall be OPERABLE in MODES 1, 2, 3, and 4 when the LOP DG start and load sequence instrumentation supports safety systems associated with the ESFAS. In MODES 5 and 6, the three channels must be OPERABLE whenever the associated DG is required to be OPERABLE to ensure that the automatic start of the DG is available when needed. Loss of the LOP DG Start and Load Sequence Instrumentation Function could result in the delay of safety systems initiation when required. This could lead to unacceptable consequences during accidents. During the loss of offsite power the DG powers the motor driven auxiliary feedwater pumps. Failure of these pumps to start would leave only one turbine driven pump, as well as an increased potential for a loss of decay heat removal through the secondary system.

APPLICABILITY

The LOP DG Start and Load Sequence Instrumentation Functions are required in MODES 1, 2, 3, and 4 because ESF Functions are designed to provide protection in these MODES. Actuation in MODE 5 or 6 is required whenever the required DG must be OPERABLE so that it can perform its function on an LOP or degraded power to the vital bus.

ACTIONS

In the event a channel's Trip Setpoint is found nonconservative with respect to the Allowable Value, or the channel is found inoperable, then the function that channel provides must be declared inoperable and the LCO Condition entered for the particular protection function affected.

Because the required channels are specified on a per bus basis, the Condition may be entered separately for each bus as appropriate.

BASES

ACTIONS (continued)

A Note has been added in the ACTIONS to clarify the application of Completion Time rules. The Conditions of this Specification may be entered independently for each Function listed in the LCO. The Completion Time(s) of the inoperable channel(s) of a Function will be tracked separately for each Function starting from the time the Condition was entered for that Function.

A.1

Condition A applies to the LOP DG start and load sequence Function with one loss of voltage or degraded voltage channel per bus inoperable.

If one channel is inoperable, Required Action A.1 requir es that channel to be placed in trip within 6 hours. With a channel in trip, the LOP DG start and load sequence instrumentation channels are configured to provide a one-out-of-two logic to initiate a trip of the incoming offsite power.

A Note is added to allow bypassing an inoperable channel for up to 4 hours for surveillance testing of other channels. This allowance is made where bypassing the channel does not cause an actuation and where at least two other channels are monitoring that parameter.

The specified Completion Time and time allowed for bypassing one channel are reasonable considering the Function remains fully OPERABLE on every bus and the low probability of an event occurring during these intervals.

B.1

Condition B applies when more than one 4.16 kV loss of voltage or more than one 4.16 kV degraded voltage channel on a single bus is inoperable.

Required Action B.1 requires restoring all but one channel to OPERABLE status. The 1 hour Completion Time should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start occurring during this interval.

BASES

ACTIONS (continued)

C.1

Condition C applies when the Required Action and associated Completion Time for Condition A for 4.16 kV Functions or Condition B are not met.

In these circumstances the Conditions specified in LCO 3.8.1, "AC Sources – Operating," or LCO 3.8.2, "AC Sources – Shutdown," for the standby emergency power source made inoperable by failure of the LOP DG start instrumentation are required to be entered immediately. The actions of those LCOs provide for adequate compensatory actions to assure unit safety.

D.1

Condition D applies when more than one 4 80 V loss of voltage channel on a single bus is inoperable.

Required Action D.1 requires restoring all but one channel to OPERABLE status. The 1 hour Completion Time should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start and load sequence during this interval.

E.1 and E.2

If the Required Action and associated Completion Time of Condition A for the 480 V loss of voltage Function or Condition D are not met, the unit must be placed in a MODE in which the LCO does not apply. This is done by placing the unit in at least MODE 3 in 6 hours and in MODE 5 in 36 hours. The Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.3.4.1

Performance of the CHANNEL CHECK once every 12 hours ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to 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

BASES

SURVEILLANCE REQUIREMENTS (continued)

the two instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the unit staff, based on a combination of the channel instrument uncertainties, including 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 is based on operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels.

SR 3.3.4.2

SR 3.3.4.2 is the performance of a TADOT. This test is performed every 31 days. The test checks trip devices that provide actuation signals directly, bypassing the analog process control equipment. The Frequency is based on the known reliability of the relays and controls and the multichannel redundancy available, and has been shown to be acceptable through operating experience.

SR 3.3.4.3

SR 3.3.4.3 is the performance of a CHANNEL CALIBRATION.

The setpoints, as well as the response to a loss of voltage and a degraded voltage test, shall include a single point verification that the trip occurs within the required time delay, as shown in Reference 1.

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency of 18 months is based on operating experience and consistency with the typical industry refueling cycle and

BASES

SURVEILLANCE REQUIREMENTS (continued)

is justified by the assumption of an 18 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

REFERENCES

1. FSAR, Section 8.8.

2. FSAR, Chapter 14.

Justification For Deviations - NUREG-1431 Section 3.03.06

13-Nov-99

JFD Number	JFD Text
01	NUREG 1431 LCO 3.3.6, Containment Purge and Exhaust Isolation Instrumentation, has not been adopted as part of Point Beach's conversion to the Improved Technical Specifications. The containment radiation detectors that initiate Containment Ventilation Isolation (CVI) on high gaseous radioactivity are not classified as safety related. No chapter 14 accident relies on these detectors to function for CVI. The offsite dose analysis for a fuel handling accident does not credit CVI, and conservatively assumes that all radioactivity released during the accident is vented from containment. (FSAR 7.3.3.3.a)

ITS:	NUREG:
N/A	LCO 3.03.06
	LCO 3.03.06 COND NOTE
	LCO 3.03.06 COND A
	LCO 3.03.06 COND A RA A.1
	LCO 3.03.06 COND B
	LCO 3.03.06 COND B RA B.1
	LCO 3.03.06 COND C
	LCO 3.03.06 COND C RA C.1
	LCO 3.03.06 COND C RA C.2
	LCO 3.03.06 T 3.03.06-01
	LCO 3.03.06 T 3.03.06-01 01
	LCO 3.03.06 T 3.03.06-01 02
	LCO 3.03.06 T 3.03.06-01 03A
	LCO 3.03.06 T 3.03.06-01 03B
	LCO 3.03.06 T 3.03.06-01 03C
	LCO 3.03.06 T 3.03.06-01 03D
	LCO 3.03.06 T 3.03.06-01 04
	SR 3.03.06.01
	SR 3.03.06.02
	SR 3.03.06.03
	SR 3.03.06.04
	SR 3.03.06.05
	SR 3.03.06.06
	SR 3.03.06.07

1

3.3 INSTRUMENTATION

3.3.6 Containment Purge and Exhaust Isolation Instrumentation

LCO 3.3.6 The Containment Purge and Exhaust Isolation instrumentat ion for each Function in Table 3.3.6-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTIONS	COMPLETION TIME
A. One radiation monitoring channel inoperable.	A.1 Restore the affected channel to OPERABLE status.	4 hours

(continued)

1

ACTIONS (continued)

CONDITION	REQUIRED ACTIONS	COMPLETION TIME
B. ---------NOTE--------- Only applicable in MODE 1, 2, 3, or 4. ---------- One or more Functions with one or more manual or automatic actuation trains inoperable. OR Two or more radiation monitoring channels inoperable. OR Required Action and associated Completion Time of Condition A not met.	B.1 Enter applicable Conditions and Required Actions of LCO 3.6.3, "Containment Isolation Valves," for containment purge and exhaust isolation valves made inoperable by isolation instrumentation.	Immediately

(continued)

Cross-Reference Report - NUREG-1431 Section 3.03.07

ITS to CTS

13-Nov-99

ITS	CTS	DOC
B 3.03.05	NEW	M.01
LCO 3.03.05	NEW	M.01
LCO 3.03.05 COND NOTE	NEW	M.01
LCO 3.03.05 COND A	NEW	M.01
LCO 3.03.05 COND A RA A.1	NEW	M.01
LCO 3.03.05 COND B	NEW	M.01
LCO 3.03.05 COND B NOTE	NEW	M.01
LCO 3.03.05 COND B RA B.1	NEW	M.01
LCO 3.03.05 COND B RA B.2	NEW	M.01
LCO 3.03.05 COND B RA B.3	NEW	M.01
LCO 3.03.05 COND B RA B.4	NEW	M.01
LCO 3.03.05 T3.03.05-01	NEW	M.01
LCO 3.03.05 T3.03.05-01 01A REQ CHA	NEW	M.01
LCO 3.03.05 T3.03.05-01 01A TRIP SET	NEW	M.01
LCO 3.03.05 T3.03.05-01 01B REQ CHA	NEW	M.01
LCO 3.03.05 T3.03.05-01 01B TRIP SET	NEW	M.01
LCO 3.03.05 T3.03.05-01 02 REQ CHAN	NEW	M.01
SR 3.03.05 NOTE	NEW	A.01
SR 3.03.05.01	15.04.01 T 15.04.01-01 36-05	L.01
	15.04.01 T 15.04.01-01 36-06	L.01
SR 3.03.05.02	15.04.01 T 15.04.01-01 36-05	A.01
	15.04.01 T 15.04.01-01 36-06	A.01
SR 3.03.05.03	15.04.01 T 15.04.01-01 36-05	A.01
	15.04.01 T 15.04.01-01 36-06	A.01

Cross-Reference Report - NUREG-1431 Section 3.03.07

CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.04.01 T 15.04.01-01 36-05	SR 3.03.05.01	L.01
	SR 3.03.05.02	A.01
	SR 3.03.05.03	A.01
15.04.01 T 15.04.01-01 36-06	SR 3.03.05.01	L.01
	SR 3.03.05.02	A.01
	SR 3.03.05.03	A.01

Description of Changes - NUREG-1431 Section 3.03.07

13-Nov-99

DOC Number	DOC Text
A.01	In the conversion of Point Beach current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted which do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the Standard Technical Specifications, Westinghouse Plants, NUREG-1431, Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).

CTS:	ITS:
15.04.01 T 15.04.01-01 36-05	SR 3.03.05.02
	SR 3.03.05.03
15.04.01 T 15.04.01-01 36-06	SR 3.03.05.02
	SR 3.03.05.03
NEW	SR 3.03.05 NOTE

L.01	CTS Table 15.4.1-1, surveillance frequency S, "each shift", is proposed to become "every 12 hours", in ITS. The nominal Point Beach shift duration is 8 hours. Therefore this change extends the nominal time between performances of these surveillances by 4 hours, resulting in a relaxation of the current requirement. This is acceptable based on other less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels, and the low probability of equipment malfunction during the additional (nominal 4 hour) time interval.

CTS:	ITS:
15.04.01 T 15.04.01-01 36-05	SR 3.03.05.01
15.04.01 T 15.04.01-01 36-06	SR 3.03.05.01

Description of Changes - NUREG-1431 Section 3.03.07

13-Nov-99

DOC Number	DOC Text
M.01	CTS 15.4.11.2 requires testing of the control room emergency filtration system automatic initiation once per year, however, the CTS does not contain any operability or surveillance tests which address the control room emergency filtration system's actuation instrumentation. The Point Beach ITS includes a proposed LCO, Conditions and Required Actions, and Surveillance Requirements addressing the control room emergency filtration system automatic initiation instrumentation. The addition of this LCO, establishes additional operational restrictions which are not contained in the CTS, which are therefore more restrictive. The proposed requirements are based upon NUREG 1431, LCO 3.3.7, Control Room Emergency Filtration System (CREFS) Actuation Instrumentation, modified to reflect the Point Beach design and licensing basis as described in the PBNP FSAR.

CTS:	ITS:
NEW	B 3.03.05
	LCO 3.03.05
	LCO 3.03.05 COND NOTE
	LCO 3.03.05 COND A
	LCO 3.03.05 COND A RA A.1
	LCO 3.03.05 COND B
	LCO 3.03.05 COND B
	LCO 3.03.05 COND B NOTE
	LCO 3.03.05 COND B RA B.1
	LCO 3.03.05 COND B RA B.2
	LCO 3.03.05 COND B RA B.3
	LCO 3.03.05 COND B RA B.4
	LCO 3.03.05 T3.03.05-01
	LCO 3.03.05 T3.03.05-01 01A REQ CHAN
	LCO 3.03.05 T3.03.05-01 01A TRIP SETPOINT
	LCO 3.03.05 T3.03.05-01 01B REQ CHAN
	LCO 3.03.05 T3.03.05-01 01B TRIP SETPOINT
	LCO 3.03.05 T3.03.05-01 01B TRIP SETPOINT
	LCO 3.03.05 T3.03.05-01 02 REQ CHAN

15.4.1 OPERATIONAL SAFETY REVIEW

Applicability:

Applies to items directly related to safety limits and limiting conditions for operation.

Objective:

A. Instrumentation shall be checked, tested and calibrated at sufficiently frequent intervals to assure safe operation.

B. Equipment and sampling tests shall be conducted at sufficiently frequent intervals to assure safe operation.

Specification:

< See Section 3.0 >

A. Calibration, testing, and checking of analog channel and testing of logic channel shall be performed as detailed in Table 15.4.1-1.

B. Equipment and sampling tests shall be conducted as detailed in Table 15.4.1-2.

Basis:

< See LCOs 3.3.1 and 3.3.2 >

A. Check

Failures such as blown instrument fuses, defective indicators, faulted amplifiers which result in "upscale" or "downscale" indication can be easily recognized by simple observation of the functioning of an instrument or system. Furthermore, such failures are, in many cases, revealed by alarm or annunciator action, and a check supplements this type of built-in surveillance.

Insert LCO 3.3.5, Table 3.3.5-1, Conditions A and B, and associated Required Actions. See Insert 3.3.7-1.

M.1

A.1

TABLE 15.4.1 (continued)

NO.	CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	PLANT CONDITIONS WHEN REQUIRED	
			12 hours (L.1)			
36.	Radiation Monitoring System					
	- RE-218 WDS Liquid Monitor	(7)	R(14)	Q	ALL	< See LCO 3.3.8 >
	- RE-223 Waste Distillate Overboard Monitor	(7)	R(14)	Q	ALL	
	- RE-231 A Steam Line Release Monitor	M(1)	R(14)	-	ALL	< See LCO 3.3.3 >
	- RE-231 B Steam Line Release Monitor	M(1)	R(14)	-	ALL	
	- RE-101 Control Room Monitor	S	R(14)	Q	ALL	
	- RE-235 Control Room Noble Gas Monitor	S	R(14)	Q	ALL	
	- RE-215 Air Ejector Monitor	D(1)	R(14)	-	ALL	< See LCO 3.4.15 >
37.	Reactor Vessel Fluid Level System	M	R	-	ALL	< See LCO 3.3.3 >
38.	Refueling Water Storage Tank Level	-	R	-	ALL	
39.	Residual Heat Removal Pump Flow	-	R	-	ALL	< See LCO 3.3.1 >
40.	Safety Valve Position Indicator	M	R	-	ALL	< See LCO 3.3.3 >
41.	Subcooling Margin Monitor	M	R	-	ALL	
42.	Deleted					
43.	Volume Control Tank Level	-	A	-	ALL	< See LCO 3.4.15 >
44.	Reactor Protection System and Emergency Safety Feature Actuation System Logic	-	-	M(1,23)	ALL	< See LCO 3.3.1, and 3.3.2 >
45.	Reactor Trip System Interlocks					
	-Intermediate Range Neutron Flux, P-6	-	R(24)	R	ALL	
	-Power Range Neutron Flux, P-8	-	R(24)	R	ALL	
	-Power Range Neutron Flux, P-9	-	R(24)	R	ALL	< See LCO 3.3.1 >
	-Power Range Neutron Flux, P-10	-	R(24)	R	ALL	
	-1st Stage Turbine Impulse Pressure	-	R(24)	R	ALL	

A.1

NOTATION USEL . TABLE 15.4.1-1

A- Annually (12 months) ← < See LCO 3.4.15 >
S- Each shift ← 12 hours ← L.1
D- Daily
W- Weekly ← < See LCO 3.3.1 and 3.3.2 >
Q- Quarterly
M- Monthly
P- Prior to reactor criticality if not performed during the previous week ← < See LCO 3.3.1 >
R- Each refueling interval (18 months)
~~PWR- Power and Low Power Operation, as defined in Specifications 15.1.h. and 15.1.m.~~
~~HOT S/D- Hot Shutdown, as defined in Specification 15.1.g.1.~~
~~COLD S/D- Cold Shutdown, as defined in Specification 15.1.g.2.~~
~~REF S/D- Refueling Shutdown, as defined in Specification 15.1.g.3.~~
~~ALL- All conditions of operation, as defined in Specifications 15.1.g, h and m.~~ ← < See LCO 3.3.1 and 3.3.2 >

NOTES USED IN TABLE 15.4.1-1

(1) Not required during periods of refueling shutdown, but must be performed prior to reactor criticality if it has not been performed during the previous surveillance period. ← < See LCO 3.3.1 >

(2) Tests of the low power trip bistable setpoints which cannot be done during power operations shall be conducted prior to reactor criticality if not done in the previous surveillance interval. ← < See LCO 3.3.1 >

(3) Perform test of the isolation valve signal. ← < See LCO 3.3.2 >

(4) Perform by means of the moveable incore detector system.

(5) Recalibrate if the absolute difference is ≥3 percent. ← < See LCO 3.3.1 >

(6) Verification of proper breaker alignment and that the 120 Vac instrument buses are energized. ← < See Section 3.8 >

(7) Source check is required prior to initiation of a release. Source check is an assessment of channel response by exposing the detector to a source of increased radiation. Channel check is required shiftly during a release. If monitor or isolation function is discovered inoperable, discontinue release immediately. ← < See LCO 3.3.1 >

(8) Verify that the associated rod insertion limit is not being violated at least once per 4 hours whenever the rod insertion limit alarm for a control bank is inoperable. ← < See Section 3.1 >

(9) Test of Narrow Range Pressure, 3.0 psig, -3.0 psig excluded. ← < See LCO 3.3.2 >

NOTES USED IN TA 15.4.1-1 (continued)

(10) When used for the Low Temperature Overpressure Protection System, each PORV shall be demonstrated operable by < See LCO 3.4.12 >
a. Performance of a channel functional test on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required operable and at least once per 31 days thereafter when the PORV is required operable.

(11) Performance of a channel functional test is required, excluding valve operation. < See LCO 3.4.11 >

< See LCO 3.4.12 >

(12) Shiftly check is required when the reactor coolant system is not open to the atmosphere and the reactor coolant system temperature is less than the minimum temperature for the in-service pressure test as specified in TS Figure 15.3.1-1.

(13) An AFW flow path to each steam generator shall be demonstrated operable, following each cold shutdown of greater than 30 days, prior to entering power operation by verifying AFW flow to each steam generator.

< See LCO 3.7.5 >

(14) Calibration is to be a verification of response to a source.

(15) Sample gas for calibration at 2% and 6%. < See LCO 3.3.3 >

(16) A check of one pressure channel per steam generator is required whenever the steam generator could be pressurized. < See LCO 3.4.3 >

(17) Includes test of logic for reactor trip on low-low level, automatic actuation logic for auxiliary feedwater pumps, and test of logic for feedwater isolation on high steam generator level.

< See LCO 3.3.1 and 3.3.2 >

< See Section 3.1 >

(18) Rod positions must be logged at least once per hour, after a load change >10% or after >30 inches of control rod motion if the on-line computer is inoperable

(19) The daily heat balance is a gain adjustment performed to match Nuclear Instrumentation System indicated power level with reactor thermal output.

(20) To confirm that hot channel factor limits are being satisfied, the requirements of TS 15.3.10.B must be met. < See LCO 3.3.1 >

(21) Check required only when the low temperature overpressure protection system is in operation. < See LCO 3.4.11 >

(22) Not required during period of cold and refueling shutdowns, but must be performed prior to reactor criticality if it has not been performed during the previous surveillance period.

< See Section 3.1 and LCO 3.3.1 >

(23) Each train tested at least every 62 days on a staggered basis. < See LCO 3.3.1 and 3.3.2 >

(24) Neutron detectors excluded from calibration. < See LCO 3.3.1 >

Insert 3.3.7-1:

LCO 3.3.5 The CREFS actuation instrumentation for each Function in Table 3.3.5-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.5-1.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more Functions inoperable.	A.1	Place CREFS in the emergency mode of operation.	7 days
B. Required Action and associated Completion Time not met.	----------NOTE---------- Required Actions B.1 and B.2 are not applicable for inoperability of the Containment Isolation actuation function. ----------		
	B.1	Suspend CORE ALTERATIONS.	Immediately
	AND		
	B.2	Suspend movement of irradiated fuel assemblies.	Immediately
	AND		
	B.3	Be in MODE 3.	6 hours
	AND		
	B.4	Be in MODE 5.	36 hours

Insert 3.3.7-1 (continued):

Table 3.3.5-1 (page 1 of 1)
CREFS Actuation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	SURVEILLANCE REQUIREMENTS	TRIP SETPOINT
1. Control Room Radiation				
a. Control Room Area Monitor	1, 2, 3, 4, (a), (b)	1	SR 3.3.5.1 SR 3.3.5.2 SR 3.3.5.3	≤ 5 mR/hr
b. Control Room Air Intake	1, 2, 3, 4, (a), (b)	1	SR 3.3.5.1 SR 3.3.5.2 SR 3.3.5.3	≤ 5E-5 μCi/cc
2. Containment Isolation	Refer to LCO 3.3.2, "ESFAS Instrumentation," Function 3, for all initiation functions and requirements.			

(a) During movement of irradiated fuel assemblies.

(b) During CORE ALTERATIONS.

Justification For Deviations - NUREG-1431 Section 3.03.07

13-Nov-99

JFD Number	JFD Text
01	NUREG 1431 LCO 3.3.7 has been altered to reflect the design and licensing basis for the Point Beach Control Room Emergency Filtration System (CREFS) automatic initiation instrumentation. As addressed in Justification for Deviation 1 of LCO 3.7.10, the Point Beach CREFS is not a completely redundant two train system. Similarly, the CREFS actuation instrumentation is not redundant. The Point Beach CREFS initiation instrumentation design consists of a single control room area monitor and a single ventilation intake noble gas monitor, either of which is capable of placing CREFS in its emergency make-up mode of operation (Mode 4). CREFS has four modes of operation, with portions of the system operating during normal unit operation to provide control room heating and cooling. The analyses for radiological consequences in the control room are based on operation of CREFS in the emergency make-up mode (Mode 4) as described in proposed ITS LCO 3.7.9. The only automatic instruments that place CREFS in emergency make-up mode are the containment isolation signal, the control room area radiation monitor and the control room ventilation system intake noble gas monitor. CREFS does not automatically restart after being load shed following a loss of offsite power; manual action is required to restart CREFS. CREFS Mode 4 operation (emergency make-up) is automatically initiated by a high radiation signal from the control room area monitor or noble gas intake monitor. Based on the above, the following changes have been proposed: Terminology has been changed in the Actions and Surveillance Requirement to reflect system design; Condition B has been omitted, based on each function (radiation monitor) consisting of a single channel; Condition E has been omitted, with the Conditions and Required Actions of Conditions C and D combined into one. A note has been added to the required actions of proposed Condition B that directs that the suspension of fuel motion actions are not applicable for the Containment Isolation Function being inoperable; and Complementary Bases changes have been made to Reflect the changes proposed in the Technical Specifications, and where necessary to fully describe the design and licensing basis for the system. **ITS:** — **NUREG:** B 3.03.05 — B 3.03.07 LCO 3.03.05 COND A — LCO 3.03.07 COND A LCO 3.03.05 COND A RA A.1 — LCO 3.03.07 COND A RA A.1 LCO 3.03.05 COND B — LCO 3.03.07 COND C

Justification For Deviations - NUREG-1431 Section 3.03.07

13-Nov-99

JFD Number	JFD Text	
	LCO 3.03.05 COND B	LCO 3.03.07 COND D
	LCO 3.03.05 COND B NOTE	N/A
	LCO 3.03.05 COND B RA B.1	LCO 3.03.07 COND D RA D.1
	LCO 3.03.05 COND B RA B.2	LCO 3.03.07 COND D RA D.2
	LCO 3.03.05 COND B RA B.3	LCO 3.03.07 COND C RA C.1
	LCO 3.03.05 COND B RA B.4	LCO 3.03.07 COND C RA C.2
	LCO 3.03.05 T3.03.05-01	LCO 3.03.07 T3.03.07-01
	LCO 3.03.05 T3.03.05-01 01A REQ CHAN	LCO 3.03.07 T3.03.07-01 03A REQ CHAN
	LCO 3.03.05 T3.03.05-01 01B REQ CHAN	LCO 3.03.07 T3.03.07-01 03B REQ CHAN
	LCO 3.03.05 T3.03.05-01 02 REQ CHAN	LCO 3.03.07 T3.03.07-01 04 REQ CHAN
	N/A	LCO 3.03.07 COND B
		LCO 3.03.07 COND B RA B.1.1
		LCO 3.03.07 COND B RA B.1.1 NOTE
		LCO 3.03.07 COND B RA B.1.2
		LCO 3.03.07 COND B RA B.2

JFD Number	JFD Text
02	The Point Beach Control Room Ventilation System design does not have a toxic gas isolation mode and no credit is taken for CREFS function in controlling control room doses from a decay tank rupture. As such, the bracketed LCO Applicability of Modes 5 and 6, Required Actions, and Bases statements related to the chemical and toxic gas protection, and decay tank rupture and associated modes of control room ventilation system operation as related to these features, have been omitted. The need for hazardous chemical and toxic gas protections was reviewed and determined to not be necessary as part of the Point Beach NUREG 0737 review. This conclusion is based on the fact that are no appreciable amounts of chlorine stored on site, and the amount and location of hazardous chemicals both on site and within 5 miles of the site do not present a significant risk to control room habitability. The activity released from a decay tank rupture consists primarily of noble gases released from processing of reactor coolant. CREFS does not provide significant protection from noble gas releases. **ITS:** B 3.03.05 N/A **NUREG:** B 3.03.07 LCO 3.03.07 COND A RA A.1 LCO 3.03.07 COND A RA A.1 NOTE LCO 3.03.07 COND E LCO 3.03.07 COND E RA E.1
03	The brackets have been removed and the proper plant specific information has been provided. **ITS:** B 3.03.05 LCO 3.03.05 T3.03.05-01 01A TRIP SETPOINT LCO 3.03.05 T3.03.05-01 01B TRIP SETPOINT **NUREG:** B 3.03.07 LCO 3.03.07 T3.03.07-01 03A TRIP SETPOINT LCO 3.03.07 T3.03.07-01 03B TRIP SETPOINT

JFD Number	JFD Text
04	Manual emergency mode start capability for the control room ventilation system has been moved from NUREG 1431 LCO 3.3.7 to proposed ITS SR 3.7.9.5. This change is necessary to reflect the Point Beach control room ventilation system design. There is no single control switch which places the control room ventilation system into its emergency make-up operating configuration as NUREG 1431 LCO 3.3.7 addresses, but rather a number of switches must be manipulated to place the system into emergency make-up. Manual actuation capability is a requirement for system operability. As addressed in Justification for Deviation 1 of NUREG 1431 LCO 3.7.10, the control room ventilation system does not automatically restart after being load shed following a loss of offsite power. Manual action is required to restart the control room ventilation system after a loss of offsite power. Incorporating this surveillance under proposed ITS LCO 3.7.9 recognizes the need to maintain and test manual actuation capability, while directing the appropriate Required Actions if this capability is lost. Subsequent Surveillance Requirements have been re-numbered to maintain sequential order.

ITS:	NUREG:
B 3.03.05	B 3.03.07
N/A	LCO 3.03.07 T3.03.07-01 01 REQ CHAN
	LCO 3.03.07 T3.03.07-01 01 TRIP SETPOINT
	SR 3.03.07.06
	SR 3.03.07.06 NOTE

JFD Number	JFD Text
05	NUREG 1431 LCO 3.3.7 describes features and required tests for CREFS actuation instrumentation which contains a logic circuit. The Point Beach CREFS actuation instrumentation consists of two radiation monitors, one area radiation monitor and one noble gas monitor. Either of these monitors in alarm, will actuate the CREFS in its emergency make-up mode of operation (Mode 4). No actuation logic exists, as each monitor directly actuates the system. There are no master or slave relays in the circuit. Surveillance for the Master and Slave relays associated with the Containment Isolation actuation function is performed in accordance with the requirements for that function. As such, line item 2 of Table 3.7.10-1 and its associated Surveillance Requirements have been omitted and the Bases has been modified as required to reflect the Point Beach design. Subsequent Surveillance Requirements have been re-numbered to maintain sequential order.

ITS:	NUREG:
B 3.03.05	B 3.03.07
LCO 3.03.05 T3.03.05-01	LCO 3.03.07 T3.03.07-01
N/A	LCO 3.03.07 T3.03.07-01 02 REQ CHAN
	LCO 3.03.07 T3.03.07-01 02 TRIP SETPOINT
	SR 3.03.07.03
	SR 3.03.07.04
	SR 3.03.07.05
SR 3.03.05.03	SR 3.03.07.07

06	As discussed in Justification for Deviation 1 of LCO 3.7.10, operation of CREFS in the emergency make-up mode of operations (Mode 4) is the only mode of operation which is addressed within the proposed ITS. NUREG 1431 LCO 3.3.7 is written to address a CREFS which is automatically initiated on a Safety Injection signal. The only parameters which will place the Point Beach CREFS in the emergency make-up mode of operation (Mode 4) are Containment Isolation, control room area radiation and control room ventilation intake noble gas. As such, reference to and discussion of automatic signals other than Containment Isolation and these two radiation monitors has been omitted from the proposed ITS.

ITS:	NUREG:
B 3.03.05	B 3.03.07
LCO 3.03.05 T3.03.05-01 02 REQ CHAN	LCO 3.03.07 T3.03.07-01 04 REQ CHAN
N/A	LCO 3.03.07 T3.03.07-01 04 REQ CHAN

Justification For Deviations - NUREG-1431 Section 3.03.07

13-Nov-99

JFD Number	JFD Text
07	The Bases for NUREG 1431 LCO 3.3.7 has been modified to reflect the CREFS actuation instrumentation design. As addressed in Justification for Deviation 1 of this LCO, the Point Beach CREFS actuation instrumentation consists of a Containment Isolation signal, a single control room area monitor and a single intake noble gas monitor. **ITS:** B 3.03.05 **NUREG:** B 3.03.07
08	Based on having only a single channel per function (radiation monitor), the Bases for NUREG 1431 SR 3.3.7.1, Channel Check, has been rewritten to clarify method of performance. As provided in the Definition of Channel Check, a Channel Check can be a qualitative assessment by observation of channel behavior. Where possible, a Channel Check should include a comparison of channel indication and status to other status derived from independent instrument channels. In the Case of these monitors, no independent instrument channel exist; therefore, the Channel Check will consist of a qualitative assessment of expected behavior based on plant and control room conditions. **ITS:** B 3.03.05 **NUREG:** B 3.03.07
09	The units associated with the trip setpoint for the control room intake noble gas monitor has been changed from mR/hr to micro-Ci/cc. The units of measure specified are appropriate for the Point Beach noble gas monitors. **ITS:** B 3.03.05 **NUREG:** B 3.03.07 LCO 3.03.05 T3.03.05-01 01B TRIP SETPOINT LCO 3.03.07 T3.03.07-01 03B TRIP SETPOINT
10	Any or all of the actuation functions are allowed to be inoperable for 7 days, which is consistent with the allowed outage time of the control room ventilation system. Therefore, the basis information pertaining to channel inoperability has been appropriately modified to account for the inoperability of entire functions, rather than channels. **ITS:** B 3.03.05 **NUREG:** B 3.03.07

JFD Number	JFD Text
11	NUREG 1431 LCO 3.3.4, Remote Shutdown System, has not been adopted as part of Point Beach's conversion to the Improved Technical Specifications. The Point Beach CTS does not contain any Specifications which would require operability of instrumentation or controls associated with the capability to remotely shutdown the units. By not adopting this specification, subsequent LCOs are renumbered.

ITS:	NUREG:
B 3.03.05	B 3.03.07
LCO 3.03.05	LCO 3.03.07
LCO 3.03.05 T3.03.05-01	LCO 3.03.07 T3.03.07-01
SR 3.03.05.01	SR 3.03.07.01
SR 3.03.05.02	SR 3.03.07.02
SR 3.03.05.03	SR 3.03.07.07

11 → 5

3.3 INSTRUMENTATION

3.3.7 Control Room Emergency Filtration System (CREFS) Actuation Instrumentation

11 → 5

LCO 3.3.7 The CREFS actuation instrumentation for each Function in Table 3.3.7-1 shall be OPERABLE.

5 ← 11

APPLICABILITY: MODES 1, 2, 3, 4, [5, and 6.]
~~During movement of irradiated fuel assemblies, [During CORE ALTERATIONS].~~

ACTIONS

According to Table 3.3.7-1. ← Approved TSTF-161

11 → 5

---NOTE---
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ~~One or more Functions with one channel or train~~ inoperable.	A.1 ~~--NOTE-- Place in toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable. --~~	2
	Place one CREFS train in emergency ~~[radiation protection]~~ mode.	7 days
Place CREFS in the emergency mode of operation.		

1

(continued)

11 → 5

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or more Functions with two channels or two trains inoperable.	----------NOTE---------- Place in the toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable. ----------	
	B.1.1 Place one CREFS train in emergency [radiation protection] mode.	Immediately
	AND	
	B.1.2 Enter applicable Conditions and Required Actions for one CREFS train made inoperable by inoperable CREFS actuation instrumentation.	Immediately
	OR	
	B.2 Place both trains in emergency [radiation protection] mode.	Immediately
~~C.~~ Required Action and associated Completion Time ~~for Condition A or B~~ not met ~~in MODE 1, 2, 3, or 4.~~	Moved RA D.2.1 and D.2.2 here as RA B.1 and B.2 ~~C.1~~ Be in MODE 3.	6 hours
	AND	
	~~C.2~~ Be in MODE 5.	36 hours

(continued)

----------NOTE----------
Required Actions B.1 and B.2 are not applicable for inoperability of the Containment Isolation actuation function.
----

1 → Moved RA D.1 and D.2 to Cond B as RA B.1 and B.2

11 → 5

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time for Condition A or B not met during movement of irradiated fuel assemblies [or during CORE ALTERATIONS].	D.1 Suspend CORE ALTERATIONS. AND D.[2] Suspend movement of irradiated fuel assemblies.	Immediately Immediately
E. Required Action and associated Completion Time for Condition A or B not met in MODE 5 or 6.	E.1 Initiate action to restore one CREFS train to OPERABLE status.	Immediately

2

SURVEILLANCE REQUIREMENTS

NOTE

Refer to Table 3.3.7.1 to determine which SRs apply for each CREFS Actuation Function.

11 → 5

SURVEILLANCE		FREQUENCY
SR 3.3.7.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.7.2	Perform COT.	92 days

5

11

(continued)

11 → 5

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.7.3	Perform ACTUATION LOGIC TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.7.4	Perform MASTER RELAY TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.7.5	Perform SLAVE RELAY TEST.	[92] days
SR 3.3.7.6	----------NOTE---------- Verification of setpoint is not required. ---------- Perform TADOT.	[18] months
SR 3.3.7.7	Perform CHANNEL CALIBRATION.	[18] months

5 → 5

5 → 11

3 → 3

4

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APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS

Table 3.3.7-1 (page 1 of 1)
CREFS Actuation Instrumentation

FUNCTION	REQUIRED CHANNELS	SURVEILLANCE REQUIREMENTS	TRIP SETPOINT
1. Manual Initiation	~~2 trains~~	SR 3.3.7.6	NA
2. Automatic Actuation Logic and Actuation Relays	2 trains	SR 3.3.7.3 SR 3.3.7.4 SR 3.3.7.5	NA
~~3.~~ Control Room Radiation Area Monitor			
a. Control Room Atmosphere	[2]	SR 3.3.7.1 SR 3.3.7.2 SR 3.3.7.7	≤ [2] mR/hr
b. Control Room Air Intakes	[2]	SR 3.3.7.1 SR 3.3.7.2 SR 3.3.7.7	≤ [2] mR/hr
~~4.~~ ~~Safety Injection~~ Containment Isolation	Refer to LCO 3.3.2, "ESFAS Instrumentation," Function ~~1.~~ for all initiation functions and requirements.		

(a) During movement of irradiated fuel assemblies.
(b) During CORE ALTERATIONS.

3/9 → ≤ 5E-5 μCi/cc

B 3.3 INSTRUMENTATION

B 3.3.7 Control Room Emergency Filtration System (CREFS) Actuation Instrumentation
11 → 5

BASES

BACKGROUND

The CREFS provides an enclosed control room environment from which the unit can be operated following an uncontrolled release of radioactivity. During normal operation, the Auxiliary Building Ventilation System provides control room ventilation. Upon receipt of an actuation signal, the CREFS initiates filtered ventilation and pressurization of the control room. This system is described in the Bases for LCO 3.7.10, "Control Room Emergency Filtration System."

1
Replace with Insert B 3.3.5-1

The actuation instrumentation consists of redundant radiation monitors in the air intakes and control room area. A high radiation signal from any of these detectors will initiate both trains of the CREFS. The control room operator can also initiate CREFS trains by manual switches in the control room. The CREFS is also actuated by a safety injection (SI) signal. The SI Function is discussed in LCO 3.3.2, "Engineered Safety Feature Actuation System (ESFAS) Instrumentation."

APPLICABLE SAFETY ANALYSES

The control room must be kept habitable for the operators stationed there during accident recovery and post accident operations.

1
Replace with Insert B 3.3.5-2

The CREFS acts to terminate the supply of unfiltered outside air to the control room, initiate filtration, and pressurize the control room. These actions are necessary to ensure the control room is kept habitable for the operators stationed there during accident recovery and post accident operations by minimizing the radiation exposure of control room personnel.

In MODES 1, 2, 3, and 4, the radiation monitor actuation of the CREFS is a backup for the SI signal actuation. This ensures initiation of the CREFS during a loss of coolant accident or steam generator tube rupture.

BASES

APPLICABLE SAFETY ANALYSIS (continued)

1

Replace with Insert B 3.3.5-2

The radiation monitor actuation of the CREFS in MODES 5 and 6, during movement of irradiated fuel assemblies [, and CORE ALTERATIONS], is the primary means to ensure control room habitability in the event of a fuel handling or waste gas decay tank rupture accident.

The CREFS actuation instrumentation satisfies Criterion 3 of the NRC Policy Statement.

LCO

The LCO requirements ensure that instrumentation necessary to initiate the CREFS is OPERABLE.

4

1. Manual Initiation

The LCO requires two channels OPERABLE. The operator can initiate the CREFS at any time by using either of two switches in the control room. This action will cause actuation of all components in the same manner as any of the automatic actuation signals.

The LCO for Manual Initiation ensures the proper amount of redundancy is maintained in the manual actuation circuitry to ensure the operator has manual initiation capability.

Each channel consists of one push button and the interconnecting wiring to the actuation logic cabinet.

5

2. Automatic Actuation Logic and Actuation Relays

The LCO requires two trains of Actuation Logic and Relays OPERABLE to ensure that no single random failure can prevent automatic actuation.

Automatic Actuation Logic and Actuation Relays consist of the same features and operate in the same manner as described for ESFAS Function 1.b., SI, in LCO 3.3.2. The applicable MODES and specified conditions for the CREFS portion of these functions are different and less restrictive than those specified for their SI roles. If one or more of the SI functions becomes inoperable in such a manner that only the CREFS function is

BASES

LCO (continued)

1

5

affected, the Conditions applicable to their SI function need not be entered. The less restrictive Actions specified for inoperability of the CREFS Functions specify sufficient compensatory measures for this case.

6 → 1. → 2. Control Room Radiation

7

Replace with Insert B 3.3.5-3

The LCO specifies two required Control Room Atmosphere Radiation Monitors and two required Control Room Air Intake Radiation Monitors to ensure that the radiation monitoring instrumentation necessary to initiate the CREFS remains OPERABLE.

For sampling systems, channel OPERABILITY involves more than OPERABILITY of channel electronics. OPERABILITY may also require correct valve lineups, sample pump operation, and filter motor operation, as well as detector OPERABILITY, if these supporting features are necessary for trip to occur under the conditions assumed by the safety analyses.

2. → 4. Safety Injection

Containment Isolation

3, → 1. Refer to LCO 3.3.2, Function 1. for all initiating Functions and requirements.

3

APPLICABILITY

Approved TSTF-161

The CREFS Functions must be OPERABLE in MODES 1, 2, 3, 4, and during CORE ALTERATIONS and movement of irradiated fuel assemblies. The Functions must also be OPERABLE in MODES [5 and 6] when required for a waste gas decay tank rupture accident, to ensure a habitable environment for the control room operators.

2

Insert B 3.3.5-7.

ACTIONS

10

The most common cause of channel inoperability is outright failure or drift of the bistable or process module sufficient to exceed the tolerance allowed by the unit specific calibration procedures. Typically, the drift is found to be small and results in a delay of actuation rather than a total loss of function. This determination is

11 → 5

BASES

ACTIONS (continued)

10 →

~~generally made during the performance of a COT, when the process instrumentation is set up for adjustment to bring it within specification. If the Trip Setpoint is less conservative than the tolerance specified by the calibration procedure, the channel must be declared inoperable immediately and the appropriate Condition entered.~~

A Note has been added to the ACTIONS indicating that separate Condition entry is allowed for each Function. The Conditions of this Specification may be entered independently for each Function listed in Table 3.3.7.1 in the accompanying LCO. The Completion Time(s) of the inoperable ~~channel(s)/train(s) of a~~ Function will be tracked separately for each Function starting from the time the Condition was entered for that Function.

5 → 11

10 →

A.1

1 → Replace with Insert B 3.3.5-4 →

~~Condition A applies to the actuation logic train Function of the CREFS, the radiation monitor channel Functions, and the manual channel Functions.~~

~~If one train is inoperable, or one radiation monitor channel is inoperable in one or more Functions, 7 days are permitted to restore it to OPERABLE status. The 7 day Completion Time is the same as is allowed if one train of the mechanical portion of the system is inoperable. The basis for this Completion Time is the same as provided in LCO 3.7.10. If the channel/train cannot be restored to OPERABLE status, one CREFS train must be placed in the emergency radiation protection mode of operation. This accomplishes the actuation instrumentation Function and places the unit in a conservative mode of operation.~~

2 →

~~The Required Action for Condition A is modified by a Note that requires placing one CREFS train in the toxic gas protection mode instead of the [radiation protection] mode of operation if the automatic transfer to toxic gas protection mode is inoperable. This ensures the CREFS train is placed in the most conservative mode of operation relative to the OPERABILITY of the associated actuation instrumentation.~~

ACTIONS (continued)

1 →

B.1.1, B.1.2, and B.2

Condition B applies to the failure of two CREFS actuation trains, two radiation monitor channels, or two manual channels. The first Required Action is to place one CREFS train in the emergency [radiation protection] mode of operation immediately. This accomplishes the actuation instrumentation Function that may have been lost and places the unit in a conservative mode of operation. The applicable Conditions and Required Actions of LCO 3.7.10 must also be entered for the CREFS train made inoperable by the inoperable actuation instrumentation. This ensures appropriate limits are placed upon train inoperability as discussed in the Bases for LCO 3.7.10.

Alternatively, both trains may be placed in the emergency [radiation protection] mode. This ensures the CREFS function is performed even in the presence of a single failure.

2 →

The Required Action for Condition B is modified by a Note that requires placing one CREFS train in the toxic gas protection mode instead of the [radiation protection] mode of operation if the automatic transfer to toxic gas protection mode is inoperable. This ensures the CREFS train is placed in the most conservative mode of operation relative to the OPERABILITY of the associated actuation instrumentation.

1 → Replace with Insert B 3.3.5-4 →

C.1 and C.2

Condition C applies when the Required Action and associated Completion Time for Condition A or B have not been met and the unit is in MODE 1, 2, 3, or 4. The unit must be brought to a MODE in which the LCO requirements are not applicable. To achieve this status, the unit must be brought to MODE 3 within 6 hours and MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

BASES

ACTIONS (continued)

1 → Replace with Insert B 3.3.5-5

D.1 and D.2

Condition D applies when the Required Action and associated Completion Time for Condition A or B have not been met [during CORE ALTERATIONS or] when irradiated fuel assemblies are being moved. Movement of irradiated fuel assemblies [and CORE ALTERATIONS] must be suspended immediately to reduce the risk of accidents that would require CREFS actuation.

2 →

E.1

Condition E applies when the Required Action and associated Completion Time for Condition A or B have not been met in MODE 5 or 6. Actions must be initiated to restore the inoperable train(s) to OPERABLE status immediately to ensure adequate isolation capability in the event of a waste gas decay tank rupture.

SURVEILLANCE REQUIREMENTS

11 → 5

A Note has been added to the SR Table to clarify that Table 3.3.7-1 determines which SRs apply to which CREFS Actuation Functions.

SR 3.3.7.1

1 → Replace with Insert B 3.3.5-6

Performance of the CHANNEL CHECK once every 12 hours ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to 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 the two instrument channels could be an indication of excessive instrument drift in one of the channels or of 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.

Agreement criteria are determined by the unit staff, based on a combination of the channel instrument uncertainties, including indication and readability. If a channel is

BASES

SURVEILLANCE REQUIREMENTS (continued)

1 → Replace with Insert B 3.3.5-6

outside the criteria, it may be an indication that the sensor or the signal processing equipment has drifted outside its limit.

The Frequency is based on operating experie nce that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels.

SR 3.3.7 2 ← 5 ← 11

A COT is performed once every 92 days on each required channel to ensure the entire channel will perform the intended function. This test verifies the capability of the instrumentation to provide the CREFS actuation. The setpoints shall be left consistent with the unit specific calibration procedure tolerance. The Frequency is based on the known reliability of the monitoring equipment and has been shown to be acceptable through operating experience.

5 →

SR 3.3.7.3

SR 3.3.7.3 is the performance of an ACTUATION LOGIC TEST. The train being tested is placed in the bypass condition, thus preventing inadvertent actuation. Through the semiautomatic tester, all possible logic combinations, with and without applicable permissives, are tested for each protection function. In addition, the master relay coil is pulse tested for continuity. This verifies that the logic modules are OPERABLE and there is an intact voltage signal path to the master relay coils. This test is performed every 31 days on a STAGGERED TEST BASIS. The Frequency is justified in WCAP-10271-P-A, Supplement 2, Rev. 1 (Ref. 1).

SR 3.3.7.4

SR 3.3.7.4 is the performance of a MASTER RELAY TEST. The MASTER RELAY TEST is the energizing of the master relay, verifying contact operation and a low voltage continuity check of the slave relay coil. Upon master relay contact operation, a low voltage is injected to the slave relay coil. This voltage is insufficient to pick up the slave relay, but large enough to demonstrate signal path

SURVEILLANCE REQUIREMENTS (continued)

continuity. This test is performed every 31 days on a STAGGERED TEST BASIS. The Frequency is acceptable based on instrument reliability and industry operating experience.

SR 3.3.7.5

1 →

SR 3.3.7.5 is the performance of a SLAVE RELAY TEST. The SLAVE RELAY TEST is the energizing of the slave relays. Contact operation is verified in one of two ways. Actuation equipment that may be operated in the design mitigation MODE is either allowed to function or is placed in a condition where the relay contact operation can be verified without operation of the equipment. Actuation equipment that may not be operated in the design mitigation MODE is prevented from operation by the SLAVE RELAY TEST circuit. For this latter case, contact operation is verified by a continuity check of the circuit containing the slave relay. This test is performed every [92] days. The Frequency is acceptable based on instrument reliability and industry operating experience.

SR 3.3.7.6

4 →

SR 3.3.7.6 is the performance of a TADOT. This test is a check of the Manual Actuation Functions and is performed every [18] months. Each Manual Actuation Function is tested up to, and including, the master relay coils. In some instances, the test includes actuation of the end device (i.e., pump starts, valve cycles, etc.).

The test also includes trip devices that provide actuation signals directly to the Solid State Protection System, bypassing the analog process control equipment. The Frequency is based on the known reliability of the Function and the redundancy available, and has been shown to be acceptable through operating experience. The SR is modified by a Note that excludes verification of setpoints during the TADOT. The Functions tested have no setpoints associated with them.

11 → 5

SR 3.3.7 ~~7~~ ← 3 ← 4/5

3

A CHANNEL CALIBRATION is performed every [18] months, or approximately at every refueling. CHANNEL CALIBRATION is a

BASES

SURVEILLANCE REQUIREMENTS (continued)

complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency is based on operating e xperience and is consistent with the typical industry refueling cycle.

REFERENCES ~~None.~~ ← 1. FSAR, Section 14.3.5. ← 1

LCO 3.3.5 BASES INSERTS

Insert B 3.3.5-1:

The control room ventilation system normally operates in the normal operating mode (Mode 1). Upon receipt of an actuation signal, the CREFS initiates the emergency make-up (Mode 4) mode of operation. The control room ventilation system and its operating modes are described in the Bases for LCO 3.7.9, "Control Room Emergency Filtration System."

The actuation instrumentation consists of containment isolation, noble gas radiation monitor in the air intake and control room area radiation monitor. A containment isolation or high radiation signal from either of these detectors will initiate the emergency make-up mode of operation (Mode 4) of the CREFS.

Insert B 3.3.5-2:

The CREFS provides airborne radiological protection for control room personnel, as demonstrated by the limiting control room dose analyses for the design basis large break loss of coolant accident. Control room dose analysis assumptions are presented in the FSAR, Section 14.3.5 (Ref. 1).

In MODES 1, 2, 3, and 4, a containment isolation signal or the CREFS radiation monitor actuation signal will provide automatic initiation of CREFS in the emergency make-up mode of operation (Mode 4) during design basis events which result in significant radiological releases to the environs (e.g. large break loss of coolant accident, steam generator tube rupture, reactor coolant pump locked rotor, etc;).

The CREFS radiation monitor actuation signal also provides automatic initiation of CREFS, in the emergency make-up mode of operation (Mode 4), to assure control room habitability in the event of a fuel handling during movement of irradiated fuel, and CORE ALTERATIONS.

Further Applicable Safety Analysis information for CREFS is contained in the Bases for LCO 3.7.9, "Control Room Emergency Filtration System."

LCO 3.3.5 BASES INSERTS

Insert B 3.3.5-3:

The LCO requires the control room area (RE-101) and the control room air intake noble gas monitor (RE-235) to be OPERABLE, to ensure that the instrumentation necessary to initiate the CREFS emergency make-up mode (Mode 4) is OPERABLE.

Insert B 3.3.5-4:

Condition A applies to the containment isolation signal, the control room area radiation monitor (RE-101) and the control room intake noble gas monitor (RE-235).

If a Function is inoperable, 7 days is permitted to restore the Function to OPERABLE status from the time the Condition was entered for that Function. The 7 day Completion Time is the same as for inoperable CREFS. The basis for this Completion Time is the same as provided in LCO 3.7.9. If the monitor cannot be restored to OPERABLE status, CREFS must be placed in the emergency make-up mode of operation (Mode 4). Placing CREFS in the emergency make-up mode of operation accomplishes the actuation instrumentation's safety function.

Insert B 3.3.5-5:

B.1, B.2, B.3, and B.4

Condition B applies when the Required Action and associated Completion Time for Condition A have not been met. If Movement of irradiated fuel assemblies or CORE ALTERATIONS are in progress, these activities must be suspended immediately to reduce the risk of accidents that would require CREFS actuation. In addition, if any unit is in MODE 1, 2, 3, or 4, the unit must be brought to a MODE in which the LCO requirements are not applicable. To achieve this status, the unit must be brought to MODE 3 within 6 hours and MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

The Required Actions for Condition B are modified by a Note that states that Required Actions B.1 and B.2 are not applicable for inoperability of the Containment Isolation actuation function. This note is necessary because the Applicability for the Containment Isolation actuation function is Modes 1, 2, 3, and 4. The Containment Isolation actuation function is not used for mitigation of accidents involving the movement of irradiated fuel assemblies.

Insert B 3.3.5-6:

Performance of the CHANNEL CHECK once every 12 hours ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. However, in the case of the control room area and control room intake noble gas monitors, no independent instrument channel exist, therefore, the CHANNEL CHECK for these monitors will consist of a qualitative assessment of expected channel behavior, based on current plant and control room conditions. 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 Frequency is based on operating experience that demonstrates channel failure is rare.

Insert B 3.3.5-7:

The Applicability for the CREFS actuation on the ESFAS Safety Injection Functions are specified in LCO 3.3.2. Refer to the Bases for LCO 3.3.2 for discussion of the Safety Injection Function Applicability.

No Significant Hazards Considerations - NUREG-1431 Section 3.03.07

13-Nov-99

NSHC Number	NSHC Text
A	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change involves reformatting and rewording of the current Technical Specifications. The reformatting and rewording process involves no technical changes to existing requirements. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change will not significantly reduce the margin of safety because it has no impact on any safety analysis assumptions. This change is administrative. As such, there is no technical change to the requirements and, therefore, there is no reduction in the margin of safety.

NSHC Number	NSHC Text
L.01	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change extends the surveillance frequency for CHANNEL CHECKS from "each shift" (nominally 8 hours) to 12 hours. This is acceptable because the CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels and because of the unlikelihood of a channel failure during this interval. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not involve any physical alteration of plant systems, structures or components, nor does it alter parameters governing normal plant operation. The proposed change does not introduce a new mode of operation or alter the method of normal plant operation. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created. 3. Does this change involve a significant reduction in a margin of safety? There are no margins of safety related to safety analyses that are dependent upon the proposed change. The requirements will continue to assure that limiting conditions for the CREFS actuation instrumentation are properly maintained. Therefore, this change does not involve a significant reduction in a margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.03.07

13-Nov-99

NSHC Number	NSHC Text
M	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change provides more restrictive requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter the assumptions relative to the mitigation of an accident or transient event. These more restrictive requirements continue to ensure process variables, structures, systems and components are maintained consistent with the safety analyses. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with assumptions made in the safety analysis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The imposition of more restrictive requirements either has no affect on or increases the margin of safety. Each change is providing additional restrictions to enhance plant safety. These changes are consistent with the safety analysis. Therefore, this change does not involve a reduction in a margin of safety.

3.3 INSTRUMENTATION

3.3.5 Control Room Emergency Filtration System (CREFS) Actuation Instrumentation

LCO 3.3.5 The CREFS actuation instrumentation for each Function in Table 3.3.5-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.5-1.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions inoperable.	A.1 Place CREFS in the emergency mode of operation.	7 days
B. Required Action and associated Completion Time not met.	----------NOTE---------- Required Actions B.1 and B.2 are not applicable for inoperability of the Containment Isolation actuation function. ----------	
	B.1 Suspend CORE ALTERATIONS.	Immediately
	AND	
	B.2 Suspend movement of irradiated fuel assemblies.	Immediately
	AND	
		(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.3 Be in MODE 3.	6 hours
	AND	
	B.4 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

----------NOTE----------
Refer to Table 3.3.5-1 to determine which SRs apply for each CREFS Actuation Function.

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.2	Perform COT.	92 days
SR 3.3.5.3	Perform CHANNEL CALIBRATION.	18 months

Table 3.3.5-1 (page 1 of 1)
CREFS Actuation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	SURVEILLANCE REQUIREMENTS	TRIP SETPOINT
1. Control Room Radiation				
a. Control Room Area Monitor	1, 2, 3, 4, (a), (b)	1	SR 3.3.5.1 SR 3.3.5.2 SR 3.3.5.3	≤ 5 mR/hr
b. Control Room Air Intake	1, 2, 3, 4, (a), (b)	1	SR 3.3.5.1 SR 3.3.5.2 SR 3.3.5.3	≤ 5E-5 μCi/cc
2. Containment Isolation	Refer to LCO 3.3.2, "ESFAS Instrumentation," Function 3, for all initiation functions and requirements.			

(a) During movement of irradiated fuel assemblies.

(b) During CORE ALTERATIONS.

B 3.3 INSTRUMENTATION

B 3.3.5 Control Room Emergency Filtration System (CREFS) Actuation Instrumentation

BASES

BACKGROUND

The CREFS provides an enclosed control room environment from which the unit can be operated following an uncontrolled release of radioactivity. The control room ventilation system normally operates in the normal operating mode (Mode 1). Upon receipt of an actuation signal, the CREFS initiates the emergency make-up (Mode 4) mode of operation. The control room ventilation system and its operating modes are described in the Bases for LCO 3.7.9, "Control Room Emergency Filtration System."

The actuation instrumentation consists of containment isolation, noble gas radiation monitor in the air intake and control room area radiation monitor. A containment isolation signal or high radiation signal from either of these detectors will initiate the emergency make-up mode of operation (Mode 4) of the CREFS.

APPLICABLE SAFETY ANALYSIS

The CREFS provides airborne radiological protection for control room personnel, as demonstrated by the limiting control room dose analyses for the design basis large break loss of coolant accident. Control room dose analysis assumptions are presented in the FSAR, Section 14.3.5 (Ref. 1).

In MODES 1, 2, 3, and 4, a containment isolation signal or the CREFS radiation monitor actuation signal will provide automatic initiation of CREFS in the emergency make-up mode of operation (Mode 4) during design basis events which result in significant radiological releases to the environs (e.g. large break loss of coolant accident, steam generator tube rupture, reactor coolant pump locked rotor, etc;).

The CREFS radiation monitor actuation signal also provides automatic initiation of CREFS, in the emergency make-up mode of operation (Mode 4), to assure control room habitability in the event of a fuel handling during movement of

BASES

APPLICABLE SAFETY ANALYSIS (continued)

irradiated fuel, and CORE ALTERATIONS.

Further Applicable Safety Analysis information for CREFS is contained in the Bases for LCO 3.7.9, "Control Room Emergency Filtration System."

The CREFS actuation instrumentation satisfies Criterion 3 of the NRC Policy Statement.

LCO

The LCO requirements ensure that instrumentation necessary to initiate the CREFS is OPERABLE.

1. Control Room Radiation

The LCO requires the control room area (RE-101) and the control room air intake noble gas monitor (RE-235) to be OPERABLE, to ensure that the instrumentation necessary to initiate the CREFS emergency make-up mode (Mode 4) is OPERABLE.

2. Containment Isolation

Refer to LCO 3.3.2, Function 3, for all initiating Functions and requirements.

APPLICABILITY

The CREFS Functions must be OPERABLE in MODES 1, 2, 3, 4, and during CORE ALTERATIONS and movement of irradiated fuel assemblies.

The Applicability for the CREFS actuation on the ESFAS Safety Injection Functions are specified in LCO 3.3.2. Refer to the Bases for LCO 3.3.2 for discussion of the Safety Injection Function Applicability.

ACTIONS

A Note has been added to the ACTIONS indicating that separate Condition entry is allowed for each Function. The Conditions of this Specification may be entered independently for each Function listed in Table 3.3.5-1 in

BASES

ACTIONS (continued)

the accompanying LCO. The Completion Time(s) of the inoperable Function will be tracked separately for each Function starting from the time the Condition was entered for that Function.

A.1

Condition A applies to the containment isolation signal, control room area radiation monitor (RE-101) and the control room intake noble gas monitor (RE-235).

If a Function is inoperable, 7 days is permitted to restore the Function to OPERABLE status from the time the Condition was entered for that Function. The 7 day Completion Time is the same as for inoperable CREFS. The basis for this Completion Time is the same as provided in LCO 3.7.9. If the Function cannot be restored to OPERABLE status, CREFS must be placed in the emergency make-up mode of operation (Mode 4). Placing CREFS in the emergency make-up mode of operation accomplishes the actuation instrumentation's safety function.

B.1, B.2, B.3, and B.4

Condition B applies when the Required Action and associated Completion Time for Condition A have not been met. If Movement of irradiated fuel assemblies or CORE ALTERATIONS are in progress, these activities must be suspended immediately to reduce the risk of accidents that would require CREFS actuation. In addition, if any unit is in MODE 1, 2, 3, or 4, the unit must be brought to a MODE in which the LCO requirements are not applicable. To achieve this status, the unit must be brought to MODE 3 within 6 hours and MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

The Required Actions for Condition B are modified by a Note that states that Required Actions B.1 and B.2 are not applicable for inoperability of the Containment Isolation actuation function. This note is necessary because the Applicability for the Containment Isolation actuation

BASES

ACTIONS (continued)

function is Modes 1, 2, 3, and 4. The Containment Isolation actuation function is not used for mitigation of accidents involving the movement of irradiated fuel assemblies.

SURVEILLANCE REQUIREMENTS

A Note has been added to the SR Table to clarify that Table 3.3.5-1 determines which SRs apply to which CREFS Actuation Functions.

SR 3.3.5.1

Performance of the CHANNEL CHECK once every 12 hours ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. However, in the case of the control room area and control room intake noble gas monitors, no independent instrument channel exist, therefore, the CHANNEL CHECK for these monitors will consist of a qualitative assessment of expected channel behavior, based on current plant and control room conditions. 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 Frequency is based on operating experience that demonstrates channel failure is rare.

SR 3.3.5.2

A COT is performed once every 92 days on each required channel to ensure the entire channel will perform the intended function. This test verifies the capability of the instrumentation to provide the CREFS actuation. The setpoints shall be left consistent with the unit specific calibration procedure tolerance. The Frequency is based on the known reliability of the monitoring equipment and has been shown to be acceptable through operating experience.

SR 3.3.5.3

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor.

BASES

SURVEILLANCE REQUIREMENTS (continued)

The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency is based on operating experience and is consistent with the typical industry refueling cycle.

REFERENCES FSAR, Section 14.3.5.

Justification For Deviations - NUREG-1431 Section 3.03.08

13-Nov-99

JFD Number	JFD Text
01	The Point Beach CTS does not contain any Specifications which require operability of the actuation instrumentation associated with the drumming station area ventilation system and it's associated spent fuel pit ventilation system. The Point Beach spent fuel pit general area is supplied with air from the drumming station area ventilation supply fans. The spent fuel pit supply fans then take suction on the general area, discharging air across the fuel pit surface. Air from above the spent fuel pit is drawn through a high efficiency filter unit by the spent fuel pit exhaust fans, which then exhausts to the auxiliary building exhaust stack. There are no charcoal filter banks installed in the exhaust air flowpath. Operation of these ventilation systems (and hence their associated actuation instrumentation) is not assumed in the mitigation of any Point Beach Design Basis Accident (DBA) or transient. As such, NUREG 1431, LCO 3.3.8 "Fuel Building Air Cleanup System (FBACS) Actuation Instrumentation", has not been adopted as part of the Point Beach conversion to the ITS.

ITS:	NUREG:
N/A	B 3.03.08
	LCO 3.03.08
	LCO 3.03.08 COND A
	LCO 3.03.08 COND A RA A.1
	LCO 3.03.08 COND B
	LCO 3.03.08 COND B RA B.1.1
	LCO 3.03.08 COND B RA B.1.2
	LCO 3.03.08 COND B RA B.2
	LCO 3.03.08 COND C
	LCO 3.03.08 COND C RA C.1
	LCO 3.03.08 COND D
	LCO 3.03.08 COND D RA D.1
	LCO 3.03.08 T3.03.08-01
	LCO 3.03.08 T3.03.08-01 01 COND A
	LCO 3.03.08 T3.03.08-01 01 COND B
	LCO 3.03.08 T3.03.08-01 01 REQ CHAN
	LCO 3.03.08 T3.03.08-01 01 TRIP SETPOINT
	LCO 3.03.08 T3.03.08-01 02 COND A
	LCO 3.03.08 T3.03.08-01 02 COND B
	LCO 3.03.08 T3.03.08-01 02 REQ CHAN
	LCO 3.03.08 T3.03.08-01 02 TRIP SETPOINT
	LCO 3.03.08 T3.03.08-01 03A COND A

Justification For Deviations - NUREG-1431 Section 3.03.08

13-Nov-99

JFD Number	JFD Text
N/A	LCO 3.03.08 T3.03.08-01 03A COND B
	LCO 3.03.08 T3.03.08-01 03A REQ CHAN
	LCO 3.03.08 T3.03.08-01 03A TRIP SETPOINT
	LCO 3.03.08 T3.03.08-01 03B COND A
	LCO 3.03.08 T3.03.08-01 03B COND B
	LCO 3.03.08 T3.03.08-01 03B REQ CHAN
	LCO 3.03.08 T3.03.08-01 03B TRIP SETPOINT
	LCO 3.03.08 T3.03.08-01 NOTE A
	SR 3.03.08 NOTE
	SR 3.03.08.01
	SR 3.03.08.02
	SR 3.03.08.03
	SR 3.03.08.04
	SR 3.03.08.04 NOTE
	SR 3.03.08.05

1

3.3 INSTRUMENTATION

3.3.8 Fuel Building Air Cleanup System (FBACS) Actuation Instrumentation

LCO 3.3.8 The FBACS actuation instrumentation for each Function in Table 3.3.8-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.8-1.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one channel or train inoperable.	A.1 Place one FBACS train in operation.	7 days
B. One or more Functions with two channels or two trains inoperable.	B.1.1 Place one FBACS train in operation. AND B.1.2 Enter applicable Conditions and Required Actions of LCO 3.7.13, "Fuel Building Air Cleanup System (FBACS)," for one train made inoperable by inoperable actuation instrumentation. OR	Immediately Immediately

(continued)

Cross-Reference Report - NUREG-1431 Section 3.03.09

ITS to CTS

13-Nov-99

ITS	CTS	DOC
LCO 3.03.06	NEW	M.01
LCO 3.03.06 COND A	NEW	M.01
LCO 3.03.06 COND A RA A.1	NEW	M.01
SR 3.03.06.01	15.04.01 T 15.04.01-02 32	L.01
	15.04.01 T 15.04.01-02 32	A.01

Cross-Reference Report - NUREG-1431 Section 3.03.09

CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.04.01 T 15.04.01-02 32	SR 3.03.06.01	L.01
	SR 3.03.06.01	A.01

Description of Changes - NUREG-1431 Section 3.03.09

13-Nov-99

DOC Number	DOC Text	
A.01	In the conversion of Point Beach current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted which do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the Standard Technical Specifications, Westinghouse Plants, NUREG-1431, Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).	
	CTS:	**ITS:**
	15.04.01 T 15.04.01-02 32	SR 3.03.06.01
L.01	CTS Table 15.4.1-2, item 32, Potential Dilution in Progress Alarm, requires the operability of the alarm to be verified prior to placing the plant in a cold shutdown condition. Proposed ITS LCO 3.3.6, SR 3.3.6.1 requires the performance of a TADOT once per 18 months. The TADOT will consist of operating the trip actuating device (opening CV-111) and verifying the required alarm (Potential Dilution in Progress Alarm). Changing the frequency from "prior to placing the unit in cold shutdown condition" to "18 months" results in a relaxation of the current requirements. This is acceptable because it is more consistent with the refueling cycle of the plant. There is no added benefit in verifying the operability of the alarm prior to each entry into the cold shutdown condition.	
	CTS:	**ITS:**
	15.04.01 T 15.04.01-02 32	SR 3.03.06.01
M.01	CTS 15.4.1-2, is modified by the addition of a requirement for the Boron Dilution Alarm to be OPERABLE in MODE 5. Additionally, a Required Action has been adopted which requires the closure of unborated water source isolation valve(s) within 1 hour, to prevent the flow of unborated water through FCV-111, if the Boron Dilution Alarm is inoperable. CTS Table 15.4.1-2 contains a surveillance requirement for the alarm, thereby establishing the requirement for its OPERABILITY. Adding the LCO to CTS Table 15.4.1-2 clarifies the MODES under which the alarm is required to be OPERABLE and provides Required Actions to take if it is inoperable. This change imposes additional requirements on unit operation and is therefore more restrictive.	
	CTS:	**ITS:**
	NEW	LCO 3.03.06 LCO 3.03.06 COND A LCO 3.03.06 COND A RA A.1

A.1

Spec 3.3.9
Page 1 of 1

TABLE 15.4.1-2 (Continued)

30.	Pressurizer Heaters	Verify that 100 KW of heaters are availabl e.	Quarterly
31.	CVCS Charging Pumps	Verify operability pumps.[17]	Quarterly
32.	Potential Dilution in Progress Alarm	Verify operability of alarm.	Prior to placing plant in cold shutdown.
33.	Core Power Distribution	Perform power distribution maps using movable incore detector system to confirm hot channel factors.	Monthly [20]
34.	Shutdown Margin	Perform shutdown margin calculation	Daily [21]

< See LCO 3.4.9 >

< See LCO 3.5.2 >

L.1

18 months

< See LCOs 3.2.1 and 3.2.2 >

Associated Specification removed with Amendment 176/180.

< See Section 3.1 >

(1) Required only during periods of power operation. < See LCO 3.4.16 >

(2) Q determination will be started when the gross activity analysis of a filtered sample indicates ≥10μCi/cc and will be redetermined if the primary coolant gross radioactivity of a filtered sample increases by more than 10μCi/cc.

(3) Drop test shall be conducted at rated reactor coolant flow. Rods shall be dropped under both cold and hot condition, but cold drop tests need not be timed. < See LCO 3.1.5 >

(4) Drop tests will be conducted in the hot condition for rods on which maintenance was performed.

(5) As accessible without disassembly of rotor.

(6) Not required during periods of refueling shutdown. < See LCOs: 3.4.16, 3.5.4, 3.7.18, and 3.4.13 >

(7) At least once per week during periods of refueling shutdown.

(8) At least three times per week (with maximum time of 72 hours between samples) during periods of refueling shutdown. < See LCO 3.4.16 >

(9) Not required during periods of cold or refueling shutdown, but must be performed prior to exceeding 200°F if it has not been performed during the previous surveillance period. < See LCOs 3.3.1, 3.6.3 >

(10) Sample to be taken after a minimum of 2 EFPD and 20 days power operation since the reactor was last subcritical for 48 hours or longer. < See LCO 3.4.16 >

(11) An approximately equal number of valves shall be tested each refueling outage such that all valves will be tested within a five year period. If any valve fails its tests, an additional number of valves equal to the number originally tested shall be tested. If any of the additional tested valves fail, all remaining valves shall be tested.

(12) The specified buses shall be determined energized in the required manner at least once per shift by verifying correct static transfer switch alignment and indicated voltage on the buses. < See Section 3.8 >

(13) Not required if the block valve is shut to isolate a PORV that is inoperable for reasons other than excessive seat leakage.

(14) Only applicable when the overpressure mitigation system is in service.

(15) Required to be performed only if conditions will be established, as defined in Specification 15.3.15, where the PORVs are used for low temperature overpressure protection. The test must be performed prior to establishing these conditions.

< See LCO 3.4.11 >

< See LCO 3.4.12 >

< See LCOs 3.7.1, 3.4.10 >

Boron Dilution Alarm shall be OPERABLE in MODE 5, or close unborated water source isolation valves within 1 hour.

M.1

Justification For Deviations - NUREG-1431 Section 3.03.09

13-Nov-99

JFD Number	JFD Text
01	NUREG 1431 LCO 3.3.9, "Boron Dilution Protection System (BDPS)", has been renamed "Boron Dilution Alarm" in ITS LCO 3.3.6. This is change is necessary because Point Beach does not have a BDPS that utilizes source range instrumentation to automatically isolate unborated water sources from the RCS. Point Beach utilizes a Boron Dilution Alarm that is actuated when the reactor water makeup pump discharge valve is not shut. FSAR Chapter 14 accident analysis requires operator action within 15 minutes of the initiation of reactor coolant dilution to prevent a loss of shutdown margin. The Boron Dilution Alarm is necessary to ensure operator awareness of the potential for an inadvertent boron dilution event. **ITS:** B 3.03.06, LCO 3.03.06 **NUREG:** B 3.03.09, LCO 3.03.09
02	NUREG 1431 LCO 3.3.6, "Containment Purge and Exhaust Isolation Instrumentation", has not been adopted as part of Point Beach's conversion to the Improved Technical Specifications (ITS). Accordingly, the LCO and Bases have been renumbered to reflect the exclusion of this LCO from ITS Section 3.3. **ITS:** B 3.03.06, LCO 3.03.06, SR 3.03.06.01 **NUREG:** B 3.03.09, LCO 3.03.09, SR 3.03.09.01
03	The applicability of ITS LCO 3.3.6 has been changed to reflect the Point Beach licensing basis. Point Beach FSAR, Chapter 14, Boron Dilution During Cold Shutdown, credits the Boron Dilution Alarm for alerting operators to the potential for a boron dilution event in this condition. The Boron Dilution Alarm is not credited in the mitigation of an inadvertent boron dilution event in any other plant condition. **ITS:** B 3.03.06, LCO 3.03.06 **NUREG:** B 3.03.09, LCO 3.03.09
04	The Note modifying the applicability of NUREG 1431, LCO 3.3.9 has not been retained in ITS LCO 3.3.6. This Note allows the boron dilution flux doubling signal to be blocked during reactor startup in MODES 2 and 3. Point Beach design basis does not utilize a boron dilution flux doubling signal in the mitigation of a boron dilution accident. **ITS:** N/A **NUREG:** LCO 3.03.09

Justification For Deviations - NUREG-1431 Section 3.03.09

13-Nov-99

JFD Number	JFD Text
05	The Conditions and Required Actions of NUREG 1431, LCO 3.3.9 have been revised to reflect the Point Beach design. Point Beach utilizes a position switch on the reactor water makeup pump discharge valve that actuates the Boron Dilution Alarm when the valve is not shut. This alarm alerts the operators to the potential for an inadvertent boron dilution. If the alarm is inoperable, the unborated water source isolation valve(s) are required to be closed within 1 hour to prevent the flow of unborated water into the RCS.

ITS:	NUREG:
B 3.03.06	B 3.03.09
LCO 3.03.06 COND A	LCO 3.03.09 COND A
LCO 3.03.06 COND A RA A.1	LCO 3.03.09 COND A RA A.1
N/A	LCO 3.03.09 COND B
	LCO 3.03.09 COND B RA B.1
	LCO 3.03.09 COND B RA B.2.1
	LCO 3.03.09 COND B RA B.2.2.1
	LCO 3.03.09 COND B RA B.2.2.2

06	The Surveillance Requirements of NUREG 1431, LCO 3.3.9 have been modified to reflect Point Beach design. Point Beach utilizes a position switch on the reactor water makeup pump discharge valve that actuates the Boron Dilution Alarm when the valve is not shut. This alarm alerts the operators to the potential for an inadvertent boron dilution. The performance of a TADOT once per 18 months, will ensure the Boron Dilution Alarm is operational. Therefore, NUREG-1431 SR 3.3.9.2 has not been adopted. Additionally, changes made to the surveillance requirements by TSTF-135 have not been incorporated.

ITS:	NUREG:
B 3.03.06	B 3.03.09
SR 3.03.06.01	SR 3.03.09.01

07	The Background and Applicable Safety Analyses sections of NUREG 1431 LCO 3.3.9 Bases have been revised to reflect the information related to the Point Beach design. The Boron Dilution Alarm alerts operators to the potential for an inadvertent addition of unborated primary grade water into the RCS when the reactor is in the cold shutdown condition. The alarm actuates when the reactor water makeup pump discharge valve is not shut. The accident analyses require operator action within 15 minutes of the initiation of reactor coolant dilution to prevent a loss of shutdown margin.

ITS:	NUREG:
B 3.03.06	B 3.03.09

Justification For Deviations - NUREG-1431 Section 3.03.09

13-Nov-99

JFD Number	JFD Text
08	The References of NUREG 1431 LCO 3.3.9 Bases have been modified to be consistent with the information provide in the Point Beach ITS LCO 3.3.6 Bases.

ITS:	NUREG:
B 3.03.06	B 3.03.09

1 → Boron Dilution Alarm → BDPS 3.3.9

2 → 6

3.3 INSTRUMENTATION

Alarm ← 1

3.3.9 Boron Dilution Protection System (BDPS)

2 → 6

Boron Dilution Alarm ← 1

LCO 3.3.9 Two trains of the BDPS shall be OPERABLE.

3

APPLICABILITY: MODE~~S [2,] 3, 4, and~~ 5.

4

~~----------NOTE----------~~
~~The boron dilution flux doubling signal may be blocked in MODES 2 and 3 during reactor startup.~~
~~----------~~

ACTIONS

CONDITION	REQUIRED ACTIONS	COMPLETION TIME
A. One train inoperable.	A.1 Restore train to OPERABLE status.	72 hours
Boron Dilution Alarm ← 5	5 → Close unborated water source isolation valve(s).	1 hour ← 5
~~B. Two trains inoperable.~~	~~B.1 Suspend operations involving positive reactivity additions.~~	~~Immediately~~
~~OR~~		
~~Required Action and associated Completion Time of Condition A not met.~~	~~AND~~	
	~~B.2.1 Restore one train to OPERABLE status.~~	~~1 hour~~
5	~~OR~~	
	~~B.2.2.1 Close unborated water source isolation valves.~~	~~1 hour~~
	~~AND~~	

(continued)

1 → Boron Dilution Alarm → BDPS 3.3 9

2 → 6

CONDITION	REQUIRED ACTIONS	COMPLETION TIME
~~B. (continued)~~	~~B.2.2.2 Perform SR 3.1.1.1.~~	~~1 hour~~ ~~AND~~ ~~Once per 12 hours thereafter~~

5

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.9.1 Perform COT.	[92] days
~~SR 3.3.9.2 Perform CHANNEL CALIBRATION.~~	~~[18] months~~

2 → 6

TADOT ← 6 → 18 months

BACKGROUND

The primary purpose of the BDPS is to mitigate the consequences of the inadvertent addition of unborated primary grade water into the Reactor Coolant System (RCS) when the reactor is in a shutdown condition (i.e., MODES 2, 3, 4, and 5).

The BDPS utilizes two channels of source range instrumentation. Each source range channel provides a signal to both trains of the BDPS. A unit computer is used to continuously record the counts per minute provided by these signals. At the end of each minute, an algorithm compares the counts per minute value (flux rate) of that 1 minute interval with the counts per minute value for the previous nine, 1 minute intervals. If the flux rate during a 1 minute interval is greater than or equal to twice the flux rate during any of the prior nine 1 minute intervals, the BDPS provides a signal to initiate mitigating actions.

Upon detection of a flux doubling by either sour ce range instrumentation train, an alarm is sounded to alert the operator and valve movement is automatically initiated to terminate the dilution and start boration. Valves that isolate the refueling water storage tank (RWST) are opened to supply 2000 ppm borated water to the suction of the charging pumps, and valves which isolate the Chemical and Volume Control System (CVCS) are closed to terminate the dilution.

APPLICABLE SAFETY ANALYSES

The BDPS senses abnormal increases in source range counts per minute (flux rate) and actuates CVCS and RWST valves to mitigate the consequences of an inadvertent boron dilution event as described in FSAR, Chapter 15 (Ref. 1). The accident analyses rely on automatic BDPS actuation to mitigate the consequences of inadvertent boron dilution events.

The BDPS satisfies Criterion 3 of the NRC Policy Statement.

BASES

LCO

5 → Insert 3 →

LCO 3.3.9 provides the requirements for OPERABILITY of the instrumentation and controls that mitigate the consequences of a boron dilution event. Two redundant trains are required to be OPERABLE to provide protection against single failure.

Because the BDPS utilizes the source range instrumentation as its detection system, the OPERABILITY of the detection system is also part of the OPERABILITY of the Reactor Trip System. The flux doubling algorithm, the alarms, and signals to the various valves all must be OPERABLE for each train in the system to be considered OPERABLE.

APPLICABILITY

3 → Insert 4 →

The BDPS must be OPERABLE in MODES [2], 3, 4, and 5 because the safety analysis identifies this system as the primary means to mitigate an inadvertent boron dilution of the RCS.

The BDPS OPERABILITY requirements are not applicable in MODE[S] 1 [and 2] because an inadvertent boron dilution would be terminated by a source range trip, a trip on the Power Range Neutron Flux – High (low setpoint nominally 25% RTP), or Overtemperature T. These RTS Functions are discussed in LCO 3.3.1, "RTS Instrumentation."

In MODE 6, a dilution event is precluded by locked valves that isolate the RCS from the potential source of unborated water (according to LCO 3.9.2, "Unborated Water Source Isolation Valves").

The Applicability is modified by a Note that allows the boron dilution flux doubling signal to be blocked during reactor startup in MODES 2 and 3. Blocking the flux doubling signal is acceptable during startup while in MODE 3, provided the reactor trip breakers are closed with the intent to withdraw rods for startup.

ACTIONS

5 → Insert 5 →

The most common cause of channel inoperability is outright failure or drift of the bistable or process module sufficient to exceed the tolerance allowed by the unit specific calibration procedure. Typically, the drift is found to be small and results in a delay of actuation rather than a total loss of function. This determination of setpoint drift is

ACTIONS (continued)

generally made during the performance of a COT when t he process instrumentation is set up for adjustment to bring it to within specification. If the Trip Setpoint is less conservative than the tolerance specified by the calibration procedure, the channel must be declared inoperable immediately and the appropriate Condition entered.

A.1

With one train of the BDPS OPERABLE, Required Action A.1 requires that the inoperable train must be restored to OPERABLE status within 72 hours. In this Condition, the remaining the BDPS train is adequate to provide protection. The 72 hour Completion Time is based on the BDPS Function and is consistent with Engineered Safety Feature Actuation System Completion Times for loss of one redundant train. Also, the remaining OPERABLE train provides continuous indication of core power status to the operator, has an alarm function, and sends a signal to both trains of the BDPS to assure system actuation.

5

B.1, B.2.1, B.2.2.1, and B.2.2.2

With two trains inoperable, or the Required Action and associated Completion Time of Condition A not met, the initial action (Required Action B.1) is to suspend all operations involving positive reactivity additions immediately. This includes withdrawal of control or shutdown rods and intentional boron dilution. A Completion Time of 1 hour is provided to restore one train to OPERABLE status.

As an alternate to restoring one train to OPERABLE status (Required Action B.2.1), Required Action B.2.2.1 requires valves listed in LCO 3.9.2 (Required Action A.2) to be secured to prevent the flow of unborated water into the RCS. Once it is recognized that two trains of the BDPS are inoperable, the operators will be aware of the possibility of a boron dilution, and the 1 hour Completion Time is adequate to complete the requirements of LCO 3.9.2.

Required Action B.2.2.2 accompanies Required Action B.2.2.1 to verify the SDM according to SR 3.1.1.1 within 1 hour and

BASES

ACTIONS (continued)

5 →

~~once per 12 hours thereafter. This backup action is intended to confirm that no unintended boron dilution has occurred while the BDPS was inoperable, and that the required SDM has been maintained. The specified Completion Time takes into consideration sufficient time for the initial determination of SDM and other information available in the control room related to SDM.~~

SURVEILLANCE REQUIREMENTS

6 → Insert 6 →

The BDPS trains are subject to a COT and a CHANNEL CALIBRATION.

SR 3.3.9.1

SR 3.3.9.1 requires the performance of a COT every [92] days, to ensure that each train of the BDPS and associated trip setpoints are fully operational. This test shall include verification that the boron dilution alarm setpoint is equal to or less than an increase of twice the count rate within a 10 minute period. The Frequency of [92] days is consistent with the requirements for source range channels in WCAP-10271-P-A (Ref. 2).

SR 3.3.9.2

SR 3.3.9.2 is the performance of a CHANNEL CALIBRATION every [18] months. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy. For the BDPS, the CHANNEL CALIBRATION shall include verification that on a simulated or actual boron dilution flux doubling signal the centrifugal charging pump suction valves from the RWST open, and the normal CVCS volume control tank discharge valves close in the required closure time of $\leq$ 20 seconds.

The Frequency is based on operating experience and consistency with the typical industry refueling cycle.

BASES

REFERENCES 1. FSAR, Chapter 15 14 7

8

~~2. WCAP-10271-P-A, Supplement 2, Revision 1, June 1990.~~

Insert 1

The primary purpose of the Boron Dilution Alarm is to alert the operator to the potential for an inadvertent addition of unborated primary grade water into the Reactor Coolant System (RCS) when the reactor is in the cold shutdown condition (i.e., MODE 5).

Insert 2

The Boron Dilution Alarm is actuated when the reactor water makeup pump discharge valve is not shut. The accident analyses require operator action within 15 minutes of the initiation of reactor coolant dilution to prevent a loss of shutdown margin. The Boron Dilution Alarm is necessary to ensure operator awareness of the potential for an inadvertent boron dilution event.

Insert 3

LCO 3.3.6 provides the requirements for OPERABILITY of the Boron Dilution Alarm.

Insert 4

The Boron Dilution Alarm must be OPERABLE in MODE 5, because the safety analysis identifies the alarm as the primary means of alerting the operator to the potential for an inadvertent boron dilution of the RCS with the unit in this condition.

Insert 5

A.1

With the Boron Dilution Alarm inoperable, Required Action A.1 requires the closure of isolation valve(s) to prevent the flow of unborated water through FCV-111, Reactor Makeup Water To Boric Acid Blender Flow Control Valve, into the RCS. This Required Action can be satisfied by closure of FCV-111. The Completion Time of 1 hour is adequate to secure the valve(s).

Insert 6

SR 3.3.6.1

SR 3.3.6.1 requires the performance of a TADOT every 18 months, to ensure the Boron Dilution Alarm is operational. The Frequency of 18 months is consistent with the typical industry refueling cycle.

No Significant Hazards Considerations - NUREG-1431 Section 3.03.09

13-Nov-99

NSHC Number	NSHC Text
A	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change involves reformatting and rewording of the current Technical Specifications. The reformatting and rewording process involves no technical changes to existing requirements. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change will not significantly reduce the margin of safety because it has no impact on any safety analysis assumptions. This change is administrative. As such, there is no technical change to the requirements and, therefore, there is no reduction in the margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.03.09

13-Nov-99

NSHC Number	NSHC Text
L.01	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? Changing the frequency of performance for a surveillance does not result in any hardware changes, nor does it significantly increase the probability of occurrence for initiation of any analyzed events since the function of the equipment has remained unchanged. Surveillance tests are intended to provide assurance of continued component operability. The frequency of performance of a surveillance does not significantly increase the consequences of an accident as a change in frequency does not change the response of the equipment in performing its specified function. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not involve any physical alteration of plant systems, structures or components, nor does it alter parameters governing normal plant operation. The proposed change does not introduce a new mode of operation or alter the method of normal plant operation. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created. 3. Does this change involve a significant reduction in a margin of safety? There are no margins of safety related to safety analyses that are dependent upon the proposed change. The requirements will continue to assure that limiting conditions for the boron dilution alarm are properly maintained. Therefore, this change does not involve a significant reduction in a margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.03.09

13-Nov-99

NSHC Number	NSHC Text
M	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change provides more restrictive requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter the assumptions relative to the mitigation of an accident or transient event. These more restrictive requirements continue to ensure process variables, structures, systems and components are maintained consistent with the safety analyses. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with assumptions made in the safety analysis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The imposition of more restrictive requirements either has no affect on or increases the margin of safety. Each change is providing additional restrictions to enhance plant safety. These changes are consistent with the safety analysis. Therefore, this change does not involve a reduction in a margin of safety.

3.3 INSTRUMENTATION

3.3.6 Boron Dilution Alarm

LCO 3.3.6 Boron Dilution Alarm shall be OPERABLE.

APPLICABILITY: MODE 5.

ACTIONS

CONDITION	REQUIRED ACTIONS	COMPLETION TIME
A. Boron Dilution Alarm inoperable.	A.1 Close unborated water source isolation valve(s).	1 hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.6.1 Perform TADOT.	18 months

B 3.3 INSTRUMENTATION

B 3.3.6 Boron Dilution Alarm

BASES

BACKGROUND	The primary purpose of the Boron Dilution Alarm is to alert the operator to the potential for an inadvertent addition of unborated primary grade water into the Reactor Coolant System (RCS) when the reactor is in the cold shutdown condition (i.e., MODE 5).
APPLICABLE SAFETY ANALYSES	The Boron Dilution Alarm is actuated when the reactor water makeup pump discharge valve is not shut. The accident analyses require operator action within 15 minutes of the initiation of reactor coolant dilution to prevent a loss of shutdown margin. The Boron Dilution Alarm is necessary to ensure operator awareness of the potential for an inadvertent boron dilution event.
LCO	LCO 3.3.6 provides the requirements for OPERABILITY of the Boron Dilution Alarm.
APPLICABILITY	The Boron Dilution Alarm must be OPERABLE in MODE 5, because the safety analysis identifies the alarm as the primary means of alerting the operator to the potential for an inadvertent boron dilution of the RCS with the unit in this condition.
ACTIONS	A.1 With the Boron Dilution Alarm inoperable, Required Action A.1 requires the closure of isolation valve(s) to prevent the flow of unborated water through FCV-111, Reactor Makeup Water To Boric Acid Blender Flow Control Valve, into the RCS. This Required Action can be satisfied by closure of FCV-111. The Completion Time of 1 hour is adequate to secure the valve(s).
SURVEILLANCE REQUIREMENTS	SR 3.3.6.1 SR 3.3.6.1 requires the performance of a TADOT every 18 months, to ensure the Boron Dilution Alarm is operational. The Frequency of 18 months is consistent with the typical industry refueling cycle.

BASES

REFERENCES 1. FSAR, Chapter 14.

Point Beach Nuclear Plant
Units 1 and 2

Technical Specifications Improvement Project

November 1999

Volume 7

Section 3.6

Cross-Reference Report - NUREG-1431 Section 3.06.01

ITS to CTS

13-Nov-99

ITS	CTS	DOC
B 3.06.01	BASES	A.06
LCO 3.06.01	15.01.D	A.03
	15.03.06 APPL	A.05
	15.03.06.A	A.01
	15.03.06.A.01	A.07
	15.03.06.A.01	L.01
	15.03.06.E	A.01
	15.04.04 APPL	A.05
LCO 3.06.01 COND A	15.03.06.A.01.A.01	A.01
LCO 3.06.01 COND A RA.1	15.03.06.A.01.A.01	A.01
LCO 3.06.01 COND B	15.03.06.A.01.A.02	A.01
LCO 3.06.01 COND B RA B.1	15.03.06.A.01.A.02.A	A.01
LCO 3.06.01 COND B RA B.2	15.03.06.A.01.A.02.B	A.01
SR 3.06.01.01	15.01.D.02	A.04
	15.01.D.04	A.04
	15.01.D.04 **	A.04
	15.03.06.E	A.01
	15.04.02.B.02	A.01
	15.04.04.I	A.01
	15.04.04.II	A.01
SR 3.06.01.02	15.03.06.E	A.01

Cross-Reference Report - NUREG-1431 Section 3.06.01
CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.01.D	LCO 3.06.01	A.03
15.01.D *	DELETED	A.02
15.01.D.02	SR 3.06.01.01	A.04
15.01.D.04	SR 3.06.01.01	A.04
15.01.D.04 **	SR 3.06.01.01	A.04
15.03.06 APPL	LCO 3.06.01	A.05
15.03.06 OBJ	DELETED	A.09
15.03.06.A	LCO 3.06.01	A.01
15.03.06.A.01	LCO 3.06.01	A.07
	LCO 3.06.01	L.01
15.03.06.A.01.A	DELETED	A.01
15.03.06.A.01.A.01	LCO 3.06.01 COND A	A.01
	LCO 3.06.01 COND A RA.1	A.01
15.03.06.A.01.A.02	LCO 3.06.01 COND B	A.01
15.03.06.A.01.A.02.A	LCO 3.06.01 COND B RA B.1	A.01
15.03.06.A.01.A.02.B	LCO 3.06.01 COND B RA B.2	A.01
15.03.06.A.01.C.02	DELETED	A.08
15.03.06.C	DELETED	L.01
15.03.06.D	DELETED	L.01
15.03.06.D *	DELETED	L.01
15.03.06.E	LCO 3.06.01	A.01
	SR 3.06.01.01	A.01
	SR 3.06.01.02	A.01
15.03.06.E.01	DELETED	M.01
15.03.06.E.02	DELETED	M.01
15.04.02.B.02	SR 3.06.01.01	A.01
15.04.04 APPL	LCO 3.06.01	A.05
15.04.04 OBJ	DELETED	A.09
15.04.04.I	SR 3.06.01.01	A.01
15.04.04.II	SR 3.06.01.01	A.01
BASES	B 3.06.01	A.06
	DELETED	L.01

Description of Changes - NUREG-1431 Section 3.06.01

13-Nov-99

DOC Number	DOC Text

A.01 In the conversion of Point Beach current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted which do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the Standard Technical Specifications, Westinghouse Plants, NUREG-1431, Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).

CTS:	ITS:
15.03.06.A	LCO 3.06.01
15.03.06.A.01.A	DELETED
15.03.06.A.01.A.01	LCO 3.06.01 COND A
	LCO 3.06.01 COND A RA.1
15.03.06.A.01.A.02	LCO 3.06.01 COND B
15.03.06.A.01.A.02.A	LCO 3.06.01 COND B RA B.1
15.03.06.A.01.A.02.B	LCO 3.06.01 COND B RA B.2
15.03.06.E	LCO 3.06.01
	SR 3.06.01.01
	SR 3.06.01.02
15.04.02.B.02	SR 3.06.01.01
15.04.04.I	SR 3.06.01.01
15.04.04.II	SR 3.06.01.01

A.02 The CTS contains a footnote which provides reference to the section in the FSAR which discusses containment isolation valves. Reference to the FSAR in this fashion does not establish any regulatory requirements, as it is merely a reference. It is unnecessary to provide references in the Technical Specifications, references when necessary are provided in the Bases of the Improved Technical Specifications. Based on the reference not establishing any regulatory requirement, deletion of this reference from the Technical Specification is administrative in nature.

CTS:	ITS:
15.01.D *	DELETED

DOC Number	DOC Text
A.03	The definition of Containment Integrity has been moved from the Definitions Section of the Current Technical Specifications to proposed ITS LCO 3.6.1, Containment; LCO 3.6.2, Containment Air Locks; and LCO 3.6.3, Containment Isolation Valves. This change is administrative in that all of the CTS requirements continue to be addressed within the aforementioned LCOs. This change eliminates confusion associated with meeting the definition of CONTAINMENT INTEGRITY when required equipment/components are inoperable. This change is administrative in nature.

CTS:	ITS:
15.01.D	LCO 3.06.01

A.04	The CTS Definition of Containment integrity states that the overall uncontrolled containment leakage shall be maintained less than La. The CTS definition and the Containment Leakage Rate Testing Program establishes the as found and as left leakage limits at 1.0 La, and 0.6 La for combined Type B and C tests and 0.75 La for Type A tests. In the proposed ITS, the requirement to maintain Type A, B, and C leakage less than La is contained in LCO 3.6.1. The proposed ITS Containment Leakage Rate Testing Program contains the as found and as left containment leakage limits consistent with the CTS limits. CTS item 15.1.D.2, requires the equipment hatch to be properly closed. The equipment hatch is a Type B penetration. Proper installation is concluded through performance of an acceptable Type B leakage test as required by proposed ITS SR 3.6.1.1. Proposed SR 3.6.3.3 requires isolation valves and blind flanges located inside the containment to be verified closed prior to entry into Mode 4 from Mode 5 if not performed in the previous 92 days. The combination of these two SRs provides assurance that the equipment hatch is properly closed, thereby incorporating CTS item 15.1.D.2 into LCO 3.6.1 and 3.6.3. These changes are administrative. All of the CTS requirements continue to be addressed within the aforementioned LCOs and Surveillance Requirements. These changes eliminate confusion associated with meeting the definition of containment integrity when required equipment/components are inoperable.

CTS:	ITS:
15.01.D.02	SR 3.06.01.01
15.01.D.04	SR 3.06.01.01
15.01.D.04 **	SR 3.06.01.01

DOC Number	DOC Text
A.05	The CTS provides an introductory statement (Applicability) which simply states which systems/components are addressed within a given section. This same information while worded differently is contained within the title of each ITS LCO. Accordingly, this change is a change in format with no change in technical requirement.

CTS:	ITS:
15.03.06 APPL	LCO 3.06.01
15.04.04 APPL	LCO 3.06.01

DOC Number	DOC Text
A.06	The Bases of the current Technical Specifications for this section have been completely replaced by revised Bases that reflect the format and applicable content of PBNP ITS, consistent with the Standard Technical Specifications for Westinghouse Plants, NUREG-1431. The revised Bases are as shown in the PBNP ITS Bases.

CTS:	ITS:
BASES	B 3.06.01
	B 3.06.01
	B 3.06.01
	B 3.06.01
	B 3.06.01
	B 3.06.01

DOC Number	DOC Text
A.07	CTS 15.3.6.A.1 requires containment integrity whenever a nuclear core is installed in the reactor, unless the reactor is in the cold shutdown condition. Proposed ITS LCO 3.6.1 require the containment to be operable in Modes 1, 2, 3, and 4. The ITS definition of Mode requires there to be fuel in the reactor to be in a defined Mode of Applicability (e.g. Mode 1, 2, 3, 4, 5, or 6) making the CTS and ITS equivalent regarding the presence of fuel. The CTS definition of Cold Shutdown requires the reactor to have a shutdown margin of at least 1% with RCS temperature less than or equal to 200 degrees. The ITS definition of Cold Shutdown (ITS Table 1.1-1 - Mode 5), is defined as Keff less than 0.99 with RCS temperature of less than or equal to 200 degrees making the CTS and ITS equivalent relative to temperature and reactivity. Based on the above, this change is administrative.

CTS:	ITS:
15.03.06.A.01	LCO 3.06.01

DOC Number	DOC Text
A.08	CTS 15.3.6.A.1.c.2 states that if containment purge and exhaust penetration leakage results in exceeding the overall containment leakage rate acceptance criteria (La), that the Actions for an inoperable containment are to be entered. The Containment purge valves at Point Beach are classified as Type B penetrations. Proposed ITS SR 3.6.1.1 requires performance of Type A, B, and C containment leakage rate tests in accordance with the Containment Leakage Rate Testing Program. Accordingly, inclusion of this SR as an attribute of operability in LCO 3.6.1 will result in entry into the applicable Conditions and Required Actions of LCO 3.6.1 if the containment leakage rate acceptance criteria is exceeded. Therefore, this provision is not necessary in the proposed ITS, and has been deleted. This deletion is administrative.

CTS:	ITS:
15.03.06.A.01.C.02	DELETED

DOC Number	DOC Text
A.09	The CTS provides an introductory statement (Objective) at the beginning of this Section of the Technical Specifications which provide a brief summary of the purpose for this Section. This information is contained in the Bases Section of the ITS. This information does not establish any regulatory requirements for the systems and components addressed within this Section. Accordingly, deletion of this information does not alter any requirement set forth in the Technical Specifications. This change is administrative and consistent with the format and presentation for the ITS as provided in NUREG 1431.

CTS:	ITS:
15.03.06 OBJ	DELETED
15.04.04 OBJ	DELETED

DOC Number	DOC Text
L.01	The CTS requires containment integrity under a number of conditions to include: 1) Whenever a nuclear core is installed in the reactor and the reactor is not in the cold shutdown condition; 2) When the reactor vessel head is removed unless the reactor is in the refueling shutdown condition; 3) Whenever positive reactivity changes are made by rod drive motion, except when testing one bank of rods at a time, rod disconnecting, and rod reconnecting provided the reactor is initially subcritical by at least 5% delta k/k; and 4) Whenever making positive reactivity changes by boron dilution unless the RCS boron concentration is maintained > 2100 ppm. The ITS will require containment integrity to be maintained in Modes 1, 2, 3, and 4 (whenever the reactor is not in cold shutdown). All other conditions and limitations have been deleted from the Technical Specifications. There are no shutdown accidents (RCS temperature less than or equal to 200 degrees) in the Point Beach current licensing basis which credits containment integrity for accident mitigation. Specifically; inadvertent RCS dilution in cold shutdown and refueling is terminated by operator action before the reactor reaches a Keff of 1.0, inadvertent rod withdrawal is terminated by the reactor protection system before fuel damage occurs, and accidental release of liquid and gaseous wastes are independent of containment status. This relaxation is consistent with analysis assumptions for Point Beach. Accordingly, these requirements may be deleted from the Technical Specifications as they are not required to provide adequate protection of public health and safety.

CTS:	ITS:
15.03.06.A.01	LCO 3.06.01
15.03.06.C	DELETED
15.03.06.D	DELETED
15.03.06.D *	DELETED
BASES	DELETED

DOC Number	DOC Text
M.01	CTS 15.3.10.E.1 and 2 contain remedial actions for single and multiple containment tendon failures. Dependent upon the level of degradation incurred, either 15 days or 72 hours is allowed to restore the tendon(s) to operable status before requiring the unit to be placed into Hot Shutdown within 6 hours and Cold Shutdown within the following 30 hours. The Point Beach containment structure is constructed with sufficient margin to allow up to three adjacent tendons to be detensioned (inoperable) without a detrimental effect on containment integrity. The proposed ITS does not contain an explicit condition for tendon inoperabilities; however, upon discovery of a degraded condition, an assessment must be made relative to containment integrity. If the assessment concludes that containment integrity cannot be maintained, the proposed ITS will allow 1 hour to restore the containment to operable status before requiring the unit to be placed into Mode 3 within 6 hours and Mode 5 within 36 hours. Accordingly, deletion of the CTS provision which could allow containment integrity to be impaired for up to 72 hours before requiring the unit to be shutdown is a more restrictive change

CTS:	ITS:
15.03.06.E.01	DELETED
15.03.06.E.02	DELETED