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Point Beach Nuclear Plant
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NPL 2000-0549 10 CFR 50.90

December 21, 2000

Document Control Desk
U.S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, DC 20555

Ladies/Gentlemen:

DOCKETS 50-266 AND 50-301
SUPPLEMENT 8 TO APPLICATION FOR AMENDMENT TO
FACILITY OPERATING LICENSE APPENDIX A:
TECHNICAL SPECIFICATIONS IMPROVEMENT PROJECT
RESPONSE TO RAI ON ITS SECTION 1.0 (TAC Nos. MA7186 and MA7187)
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

On November 15, 1999, Wisconsin Electric Power Company (WE), then licensee for the Point Beach Nuclear Plant (PBNP), submitted an application to amend Appendix A, Technical Specifications, for Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Power Plant, Units 1 and 2, respectively (reference letter NPL 99-0669). The application proposed to convert the Point Beach Current Technical Specifications (CTS) to the Point Beach Improved Technical Specifications (ITS). That application contained documentation for ITS Chapters 1.0 and 2.0 and Sections 3.0 through 3.9. Documentation for ITS Chapters 4.0 and 5.0 was enclosed with Supplement 1 to the PBNP ITS submittal dated March 15, 2000 (reference letter NPL 2000-0142).

In a letter dated November 20, 2000, the NRC issued a Request for Additional Information (RAI) to Nuclear Management Company, LLC (NMC) on ITS Section 1.0.

Attachment 1 of this letter includes the NMC response to the Staff's questions in the above referenced RAIs. In some instances, the response includes changes that are required to the original submittal, including changes to the Current Technical Specification (CTS) markups, Descriptions of Change (DOC), NUREG markups, proposed ITS and associated Bases, Justifications for Deviation (JFD), and No Significant Hazard Considerations (NSHC). These changes are discussed in the response to each question and are included in the attachment. Pages containing the changes required to the DOC, JFD, and NSHC are identified by "Rev. D".

A001

The changes required to the CTS, NUREG, and ITS markups are identified as follows (example):

D

RAI 3.4.1-1

The revision bar identifies the section that has been revised; the D in the triangle identifies revision D; and the RAI number identifies which RAI question the revision relates to. The old pages in the original submittal should be replaced with the new pages enclosed with this letter, following the instructions of attachment 2.

Additional changes to the conversion package for the subject ITS Sections have been identified as a result of ITS reviews by NMC staff and Amendment approvals that have occurred after the original ITS submittal. These additional changes have been included (where necessary) in response to each RAI question for completeness and are clearly identified in the new pages enclosed with this letter.

NMC has determined that this supplement does not involve a significant hazards consideration, authorize a significant change in the types or total amounts of effluent release, or result in any significant increase in individual or cumulative occupational radiation exposure. Therefore, NMC concludes that the proposed supplement meets the categorical exclusion requirements of 10 CFR 51.22(c)(9) and that an environmental impact appraisal need not be prepared.

NMC is notifying the State of Wisconsin of this supplement by transmitting a copy of this letter, and its attachments, to the Public Service Commission of Wisconsin.

Other supplements to the PBNP ITS submittal, in response to previous RAIs, are listed for reference:

- Supplement 2 dated June 15, 2000 (ITS sections 2.0, 3.1, 3.2, 3.5; letter NPL 2000-0260)
- Supplement 3 dated June 19, 2000 (ITS section 3.6; letter NPL 2000-0271)
- Supplement 4 dated July 28, 2000 (ITS section 3.8; letter NPL 2000-0341)
- Supplement 5 dated August 17, 2000 (ITS sections 3.4, 3.9; letter NPL 2000-0371)
- Supplement 6 dated September 14, 2000 (ITS section 5.5; letter NPL 2000-0411)
- Supplement 7 dated October 19, 2000 (ITS sections 3.6, 3.7.4, 3.7.5; letter NPL 2000-0465)

To the best of my knowledge and belief, the statements contained in this document are true and correct. In some respects, these statements are not based entirely on my personal knowledge, but on information furnished by cognizant NMC employees, contractor employees, and/or consultants. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

Should you have any questions on this submittal or require additional information, please contact me.

Sincerely,

Mark Reddemann
Site Vice President

Subscribed to and sworn before me
on this 21 day of December, 2000

Notary Public, State of Wisconsin

My Commission expires on October 24, 2004.

JG/jlk

Attachments

Enclosure

cc: NRC Regional Administrator
NRC Resident Inspector
NRC Project Manager
PSCW

DOCKETS 50-266 AND 50-301
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
TECHNICAL SPECIFICATIONS IMPROVEMENT PROJECT SECTION 1.0
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

The following information is provided in response to the Nuclear Regulatory Commission staff's requests for additional information dated November 20, 2000.

Each question is restated on the following pages with NMC's response following.

NRC Question 1.0-1:

1.0-1 DOC A2
CTS 1.15, Definition of Operability
CTS 3.0.D
ITS Definition of Operability

The CTS operability definition requires operability of both normal power (offsite including the gas turbine generator, via an X04 transformer) and emergency power (from the normal diesel generator) for a specified component to be operable. DOC A2 incorrectly explains this is negated by the provision of CTS 3.0.D, which only requires either normal or emergency power, but not both - but only under certain conditions (all redundant power sources must be operable; i.e., they all have both normal and emergency power). The ITS only requires one AC source, normal or emergency - without requiring satisfying any conditions. ITS 3.8.1, AC Sources - Operating imposes conditions similar to CTS 3.0.D in the event a single AC source is inoperable by requiring cross-train checks. **Comment**: Adoption of the STS operability definition is a relaxation of the CTS electrical power requirement for operability. Revise the submittal with an L-type change classification, justification, and no significant hazards consideration determination analysis.

Response:

The submittal has been revised with a L-type change classification, justification, and NSHC analysis.

NRC Question 1.0-2:

1.0-2 JFD 8, DOC A7
CTS, ITS, and STS definitions of Shutdown Margin

The ITS proposes to explicitly exclude accounting for the highest worth RCCA being fully withdrawn from the core in the case where all the RCCAs, including any that cannot be moved, are fully inserted. The reason is that the CTS doesn't require this, and it would be overly

conservative. Actually, the CTS is silent about this situation, and thus is ambiguous. The STS would require this assumption in this situation. Deviating from the STS definition as proposed would be generic because the basis for it is not tied to the plant design. In addition, staff considers this CTS change involving a deviation from the STS to be beyond scope. It is thus assigned as beyond scope item 98. **Comment:** Adopt the wording of the STS shutdown margin definition.

Response:

The Point Beach CTS states, "Shutdown margin is the instantaneous amount of reactivity by which the reactor core would be subcritical if all ***withdrawn*** control rods were tripped into the core but the highest worth withdrawn RCCA remains fully withdrawn." (emphasis added). Therefore, if no control rods are withdrawn as the initial condition, it is physically impossible for a RCCA to be stuck in the withdrawn position. Consequently, the CTS do not require shutdown margin considerations for such an impossibility. This long-standing plant-specific interpretation is incorporated in plant procedures governing control rod activities. These procedures, copies of which have been provided to NRC staff, explicitly limit the allowance to exclude accounting for the highest worth RCCA being fully withdrawn from the core, to conditions where **all control rods are fully inserted**, as required by the CTS. If **any** control rod is not in a fully inserted position, plant procedures, the CTS, and the proposed ITS all would **require immediately accounting** for the highest worth RCCA being fully withdrawn from the core. These same specifications require establishing the required shutdown margin, to account for the highest worth RCCA being fully withdrawn from the core, **prior** to commencing any rod withdrawal. The proposed ITS is consistent with the Point Beach licensing basis and we request its approval as written.

<u>NRC Question 1.0-3:</u>

1.0-3 DOCs A8 and A11
CTS definition of Power Operation
CTS definition of Low Power Operation
ITS and STS definitions of Mode 1, Power Operation, and Mode 2, Startup

(a) The CTS defines Power Operation as critical with indicated power at >2% rated power. The ITS and STS define Mode 1, Power Operation, as $K_{eff} \geq 0.99$ and indicated power level as > 5% of rated thermal power (RTP), excluding decay heat (which can vary from negligible to 7% RTP, based on the unit's preceding power history). DOC A8 does not explain how 5% RTP, excluding decay heat, is equivalent to 2% rated power (also excluding decay heat, based on industry and Point Beach's current practice). If they are not really equivalent, then this change may not be administrative. It appears that, at the very least, the scope of Mode 1 has decreased because 5% RTP is not the same as 2% rated power.

(b) The same issue occurs in DOC A11 for the CTS definition of Low Power Operation and the ITS definition of Mode 2, whose scope appears to have increased.

(c) Also, the CTS defines Reactor Critical as $K_{eff} = 1.0$, while the ITS definitions of Modes 1 and 2 use $K_{eff} \geq 0.99$. DOCs A8 and A11 incorrectly imply that 0.99 = 1.0.

Comment: Clarify DOCs A8 and A11.

Response:

DOC A8 has been reclassified and revised as a M-type change. DOC A11 has been reclassified as a L-type change with a corresponding justification and NSHC analysis to support the change from 2% to 5% as the mode change transition point. These DOCs also discuss that specifying Keff $\geq$ 0.99 during critical reactor operation is essentially the same as specifying Keff = 1.0 since, during operation, Keff actually varies slightly around its nominal value of 1.0 when the reactor is critical.

NRC Question 1.0-4:

1.0-4 DOC L2
ITS definition of Mode 6

DOC L2 states that ITS Mode 6 will range up to 212° F, but the ITS has only 200° F, which is consistent with the STS. Comment: Correct the error in the submittal.

Response:

The typographical error in DOC L.02 has been corrected to read 200 vice 212.

NRC Question 1.0-5:

1.0-5 DOCs LA1, LA2, LA3, and LB1

The referenced LA-type DOCs are deficient in that they do not state (a) which licensee-controlled documents the removed requirements/information/details will be placed and maintained in, and (b) the governing regulatory control processes for changes to these requirements in their new locations. In addition, the LA-type DOCs refer to the requirements as "deleted" when they are more appropriately described as being moved from the TSs to licensee-controlled documents. Lastly, DOC LB1 should be treated as an L-type DOC; however, as this is likely a common deficiency in the entire submittal, it will suffice to state that duplicate reporting requirements of 10 CFR 50.73 are being removed from the TSs and placed in the Technical Requirements Manual. **Comment:** Modify the DOCs as suggested. Also, fix all the other LA-

type and LB-type DOCs in the submittal. Alternately, only treat LB-type DOCs as a general category of L-type DOCs and include them with the L-type DOCs in the safety evaluation L-DOC table. Then, the "deletion-from-TS" language can remain.

Response:

DOCs LA1 and LA2 have been reclassified as L-type changes with a corresponding justification and NSHC analysis. These DOCs referenced unnecessary details contained within the CTS that are being proposed for deletion. DOC LA3 has been revised to specify the document to which the relocated information is being transferred to. The LB-type DOCs are planned for inclusion as a general category of L-type DOCs in the L-DOC table as requested by the reviewer.

NRC Question 1.0-6:

1.0-6 JFD 6
ITS definition of Channel Operational Test (COT)

The ITS definition of COT omits the STS phrase "as close to the sensor as practicable." The JFD seems to indicate that the phrase is unnecessary, but implies it is part of current testing practice, even though these words are not contained in the corresponding CTS definition of Channel Functional Test. Thus, including it would not pose an undue burden. The reason provided in the JFD ("the additional information in the COT is not necessary") would apply to any plant's safety-related instrumentation systems, were it true; and thus, this deviation, were it justifiable, would be generic. The phrase, however, is necessary to ensure adequate testing. **Comment:** Adopt the entire STS COT definition.

Response:

The omitted STS phrase has been added back into the ITS. JFD 6 has been marked as not used.

NRC Question 1.0-7:

1.0-7 ITS PTLR definition
JFD 4

The ITS proposes to include certain information (power-operated relief valve (PORV) lift settings and the enable temperature associated with the low-temperature overpressure protection (LTOP) system) in the pressure-temperature limits report (PTLR) instead of in the relevant ITS requirements. Thus, the ITS PTLR definition deviates from the STS PTLR definition by referencing this information and by replacing the explicit list of associated specifications in the PTLR definition with the general phrase "in individual Specifications." The reasons for these deviations are not plant-specific, but should be resolved in the context of the PTLR review.

Comment: Adopt the STS definition wording and include PORV lift settings and the enable temperature associated with the LTOP system in the appropriate specifications in the ITS to be consistent with the corresponding STS specifications.

Response:

The STS definition of PTLR has been adopted, as modified by approved TSTF-233. PORV lift settings and the enable temperature associated with the LTOP system are contained in the PTLR as per the most recently approved TSTFs. This is also consistent with the guidance in the NRC approved version of WCAP 14040. As a result of these changes, JFD 4 has been marked as not used and Insert 1.0-02 has been deleted.

NRC Question 1.0-8:

1.0-8 ITS definition of L_a
JFD 9

ITS retains the use of "peak design containment pressure (P_a)" instead of the STS' use of the "calculated peak containment pressure (P_a)" without explaining the difference in JFD 9. **Comment:** Justify the difference, or adopt the STS language.

Response:

Additional justification has been provided for JFD 9 to support retention of the existing licensing basis information.

NRC Question 1.0-9:

1.0-9 ITS 1.3, Example 1.3-3
JFD 7

The proposed changes to the STS language in the referenced example do not make the example easier to understand, and thus are not justified. It is preferable to stay with the generic STS wording. The additional explanations desired by the licensee are always possible outside the ITS and in operator training. **Comment**: Adopt the STS language for Example 1.3-3.

Response:

The STS language has been adopted for this example.

Additional Corrections Required to ITS Section 1.0:

Additional corrections to the conversion package for ITS Section 1.0 have been identified as a result of ITS reviews by plant staff.

The definitions of COLR and PTLR in section 1.1 referenced the incorrect corresponding ITS sections. Therefore, the reference to ITS 5.6.5 in the COLR definition was changed to ITS 5.6.4 and the reference to ITS 5.6.6 in the PTLR definition was changed to ITS 5.6.5.

Description of Change (DOC) A-12 was inadvertently omitted from the original submittal. It is provided with this Supplement.

ATTACHMENT 2
DISCARD AND INSERTION INSTRUCTIONS

VOLUME 1	
SECTION 1.0	
DISCARD	**INSERT**
DOC pages 1 through 13 of 13	DOC pages 1 through 13 of 13
CTS markup pages 1 of 19, 2 of 19, 3 of 19	CTS markup pages 1 of 19, 2 of 19, 3 of 19
JFD pages 1 through 3 of 3	JFD pages 1 and 2 of 2
ISTS markup pages 1.1-2, 1.1-5, 1.3-7	ISTS markup pages 1.1-2, 1.1-5, 1.3-7
SECTION 1.0 NUREG INSERTS (1 page)	SECTION 1.0 NUREG INSERTS (1 page)
NSHC pages 1 through 7 of 7	NSHC pages 1 through 11 of 11
ITS pages 1.1-1 through 1.1-7, 1.3-1 through 1.3-13	ITS pages 1.1-1 through 1.1-7, 1.3-1 through 1.3-13

ENCLOSURE

Description of Changes - NUREG-1431 Section 1.0

13-Dec-00

DOC Number	DOC Text
A.01 Rev. A	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:
15.01.K	1.01.23 THERMAL POWER
15.01.O	1.01.09 DE I-131
15.01.P	1.01.10 E- BAR

DOC Number	DOC Text
A.02 Rev. D	Not used.

CTS:	ITS:
N/A	N/A

DOC Number	DOC Text
A.03 Rev. A	All changes to the definition of channel calibration are administrative. However, several major changes warrant further discussion as follows: RTD and thermocouple calibrations are per the definition of Channel Calibration to be performed using an inplace qualitative assessment of the sensor and calibration of the remaining adjustable devices in the channel. Based on the CTS being general relative to what portions of the channel needs to be adjusted to obtain proper response (electronics versus sensor), this change is considered to be bounded by the CTS definition, and therefore is administrative. Channel calibration now specifically states that a calibration may be performed by means of any series of sequential, overlapping, or total channel steps. The CTS definition does not preclude the use of sequential overlapping steps, which is a valid means for performing this surveillance activity (provided sufficient overlap exists). Therefore, this change is reflective of what the CTS allows and is in practice today. The ITS has removed the requirement to include equipment action in the definition of channel calibration. The boundary of a channel ends at the point where the channel output combines with other channels and or interlocks to produce an output. This definition is consistent with the IEEE definition of a channel. Where a channel produces a direct actuation, equipment actuation will continue to be verified; however, when a channel provides input to a logic or interlock, the channel calibration will only require verification of the input to that logic or interlock. For functions which input to a logic or interlock, an actuation logic test in combination with master and slave relay tests will be required by the ITS, which will verify the functionality of the remainder of the circuit.

CTS:	ITS:
15.01.F.03	1.01.04 CHANNEL CALIBRATION

DOC Number	DOC Text
A.04 Rev. A	The definition of Mode has been added to the definitions section. This definition is used in the ITS in combination with the Mode Table to establish a single set of exclusive plant conditions to define operating conditions (Modes). In establishing exclusive conditions/Modes, there will be no ambiguity in the Technical Specifications regarding which Mode the unit is in, thereby clarifying which LCO, Action, and Surveillance Requirements are applicable. Accordingly, the addition of this definition is administrative, for the purpose of establishing consistent use and application of defined Modes throughout the Technical Specifications. **CTS:** NEW **ITS:** 1.01.14 MODE
A.05 Rev. A	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. This definition is used as a stand alone operational Condition as well as in conjunction with several other operational Conditions (i.e. Cold Shutdown, Refueling Shutdown, and Refueling Operations) in defining LCO Applicability and Actions. The definition of Mode has been added to the definitions section (DOC A.04 of Chapter 1.0), which used in combination with the ITS Mode Table establishes a single set of exclusive plant conditions defining operational Modes. 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 and all reactor head closure bolts fully tensioned. The ITS definition of Mode 5 is equivalent to the CTS definition with the exception of footnote b which provides differentiation between Mode 5 (Cold Shutdown) and Mode 6 (Refueling) conditions. The addition of the condition of head bolt fully tensioned, in combination with other proposed Modes and Conditions (e.g. Mode 6, movement of irradiated fuel, core alterations, etc.) ensures that a set of established conditions will exist to define plant Modes and Conditions in a consistent, unambiguous manner. **CTS:** 15.01.G.02 **ITS:** 1.01 T1.01-01 MODE 5 1.01 T1.01-01 NOTE B

DOC Number	DOC Text
A.06 Rev. A	The definition of Refueling Shutdown in the CTS requires the reactor to be subcritical by at least 5 percent delta K/K with Tavg less than or equal to 140 degrees, in addition this definition is applicable to shutdowns to move fuel to and from the reactor core. This definition is used in the CTS to define Modes and Conditions in addition to surveillance intervals. The ITS defines surveillance interval in terms of fixed frequencies (e.g. 18 months) or plant conditions/evolutions (e.g. after refueling). The CTS stipulation that a Refueling Shutdown is defined as ". . . a shutdown to move fuel to and from the reactor core.", has been deleted. The CTS implies exclusion of this definition to operations where the reactor is shutdown for purposes other that movement of fuel to and from the reactor core. As such, this stipulation in the CTS can lead to inappropriate application of this defined term in that there would be no appropriate Mode if the shutdown were to only perform maintenance activities. The ITS does not contain this restriction relative to the definition of Mode 6, which is a condition involving one or more Reactor Vessel closure bolts being less than fully tensioned. Detensioning of the reactor vessel closure bolts defines entry and exit from conditions that will allow refueling to occur. Applicabilities specific to evolutions involving core alterations and movement of irradiated fuel are addressed in the ITS through specific Applicabilities citing these evolutions (e.g. during movement of irradiated fuel). Accordingly, this change will eliminate ambiguity relative to defining plant Conditions and Modes, and in combination with other defined Conditions (e.g. handling of irradiated fuel and core alterations) establish a consistent approach to the application of the proposed definition of Mode 6. This change is administrative. Any changes that are not administrative as a result of changing this definition relative to Actions, Applicabilities, and Frequencies, are addressed by the Description of Change specific to the affected requirement.

CTS:	ITS:
15.01.G.03	1.01 T1.01-01 MODE 6 1.01 T1.01-01 NOTE C

DOC Number	DOC Text
A.07 Rev. A	The CTS definition of shutdown margin is the instantaneous amount of reactivity by which the reactor core would be subcritical if all withdrawn control rods were tripped into the core but the highest worth withdrawn RCCA remains fully withdrawn. If the reactor is shut down from a power condition, the hot shutdown temperature should be assumed. In other cases, no change in temperature should be assumed. CTS 15.3.10.B.1.a.2 requires the rod insertion limits to be adjusted to reflect the worth of untrippable control rods; therefore, the reactivity worth of a stuck rod must be added to required SDM. The proposed ITS definition of shutdown margin is the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. However, it is not necessary to account for a stuck RCCA when all RCCAs are fully inserted; b. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and, c. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level. While worded differently, the meaning, use, and methodology has not been altered, making this change administrative.

CTS:	ITS:
15.01.G.04	1.01.20 SDM
15.03.10.B.01.A.02.B	1.01.20 SDM

DOC Number	DOC Text
A.08 Rev. D	Not used.

CTS:	ITS:
N/A	N/A N/A

DOC Number	DOC Text
A.09 Rev. A	The definitions of Rated Power have been reworded to be consistent with Rated Thermal Power in NUREG 1431. No technical changes are presented through the revisions proposed, therefore this change is administrative.

CTS:	ITS:
15.01.J	1.01.19 RTP

DOC Number	DOC Text
A.10 Rev. A	The definition of Reactor Critical has been deleted from the Technical Specifications. Reactor Critical is not utilized as a defined term in the ITS. The concept of criticality has been maintained through the use of Keff in the Mode definition table as well as in individual LCOs where necessary within the ITS. No change in requirement has occurred as a result of this change, therefore this change is administrative.

CTS:	ITS:
15.01.J *	DELETED

DOC Number	DOC Text	
A.11 Rev. D	Not used.	
	CTS:	**ITS:**
	N/A	N/A
A.12 Rev. D	The definition of Fire Suppression Water System is no longer referenced in the CTS. Fire protection was removed from the Technical Specifications under Amendments 170 and 174 for Unit 1 and 2, respectively, making this defined term unnecessary. Accordingly, deletion of this defined term is administrative.	
	CTS:	**ITS:**
	15.01.N	DELETED

DOC Number	DOC Text
A.13 Rev. A	The following definitions have been added as a result of the conversion to the improved Technical Specifications: ACTIONS; ACTUATION LOGIC TEST; AXIAL FLUX DIFFERENCE (AFD); CORE OPERATING LIMITS REPORT; LEAKAGE; MASTER RELAY TEST; PHYSIC TESTS; PRESSURE TEMPERATURE LIMITS REPORT (PTLR); SLAVE RELAY TEST; STAGGERED TEST BASIS; and TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT). These definitions are used in several locations within the Technical Specifications and have been added to enhance understanding and usability of the Technical Specifications. This change is consistent with NUREG 1431 and is administrative in nature. Technical changes resulting from the use of these defined terms is justified within the Description of Change which adds a new or modifies the existing requirement.

CTS:	ITS:
15.01.N	DELETED
NEW	1.01.01 ACTIONS 1.01.02 ALT 1.01.03 AFD 1.01.08 COLR 1.01.12a1 LEAKAGE (IDENTIFIED) 1.01.12a2 LEAKAGE (IDENTIFIED) 1.01.12a3 LEAKAGE (IDENTIFIED) 1.01.12b LEAKAGE (UNIDENTIFIED) 1.01.12c LEAKAGE (PRESSURE BOUNDARY) 1.01.13 MASTER RELAY TEST 1.01.16 PHYSICS TESTS 1.01.17 PTLR 1.01.21 SLAVE RELAY TEST 1.01.22 STAGGERED TEST BASIS 1.01.24 TADOT

Description of Changes - NUREG-1431 Section 1.0

13-Dec-00

DOC Number	DOC Text
A.14 Rev. A	Proposed Section 1.02 provides specific rules for use, and examples of the logical connectors AND and OR and the numbering sequence associated with their use in the proposed Technical Specifications. This section is intended to assure consistent usage of the ITS. This change is consistent with NUREG 1431 and is administrative in nature. Any technical changes resulting from the use of logical connectors is justified within the Description of Change which adds or modifies the existing requirement. **CTS:** NEW **ITS:** 1.02
A.15 Rev. A	Proposed Section 1.04 provides specific rules for use and examples of Frequencies. This section is intended to assure consistent usage of the ITS. This change is an administrative change. Any technical changes resulting from the use of Completion Times is justified within the Description of Change which adds or modifies the existing requirement. This revision is being proposed consistent with NUREG-1431. **CTS:** NEW **ITS:** 1.04
A.16 Rev. A	CTS 15.6.12.C states that the maximum allowable primary containment leakage rate, La at Pa, shall be 0.4% of containment air weight per day. This information has been moved to the Definition Section as a defined term. The definition of La reads; "La - The maximum allowable primary containment leakage rate, La, shall be 0.4% of primary containment air weight per day at the peak design containment pressure (Pa)." This definition is consistent with the CTS and is administrative. **CTS:** 15.06.12.C **ITS:** 1.01.11 La
A.17 Rev. A	The CTS present the definition of QPTR in the form of a formula which represent the fashion in which the QPTR alarm circuit functions. Per design the alarm circuit compares power range detector quadrant power levels (upper and lower detectors). The proposed ITS presents the definition of QPTR in a prose presentation representing the Westinghouse peaking factor monitoring methodology. Accordingly, the definition has been changed from comparing quadrant power levels to comparing normalized power levels in both the upper and lower halves of the core. Based on there being no change of intent, practice, or methodology proposed as a result of this change. This change is administrative. **CTS:** 15.01.B **ITS:** 1.01.18 QPTR

DOC Number	DOC Text
A.18 Rev. A	The CTS definition of Channel Functional Test requires the injection of a simulated signal into the channel to verify its operability, including alarm and/or trip actions. The proposed definition of Channel Operational Test (COT) requires the injection of a simulated or actual signal into the channel to verify the operability of all devices in the channel required for channel operability. As such, the proposed definition and the CTS definition require the same testing. The change in wording is more consistent with that used in NUREG 1431. The proposed COT definition also states that the COT may be performed by means of any series of sequential, overlapping, or total channel steps. This attribute is included in other calibration and test definitions and is being added for consistency. This change is administrative. **CTS:** 15.01.F.02 **ITS:** 1.01.06 COT
L.01 Rev. A	The CTS definition of Channel Check is a qualitative assessment of channel behavior by comparison of the channel being tested with other independent channels measuring the same variable. The ITS is a qualitative assessment as well. However, comparison with other channels is only required where possible. This change is necessary to allow for performance of channel checks for functions that have only two channels when one of the channels is inoperable and/or single channel functions. Without this provision, a channel check would not be possible in several instances, which would result in declaring the remaining channel inoperable, resulting in unnecessary unit transients or shutdowns. A qualitative assessment, can be performed on single channels, by comparing status and indication to expected conditions and parameters; thereby, still fulfilling the intent of this requirement, which is to qualitatively determine that the channel is functioning properly. Therefore, this change is administrative. Other wording changes have been proposed consistent with NUREG 1431, which do not alter the intent or usage of this defined term. Accordingly, all other changes to this definition are administrative. **CTS:** 15.01.F.01 **ITS:** 1.01.05 CHANNEL CHECK
L.02 Rev. D	The current Technical Specifications requirement that average reactor coolant temperature must be less than or equal to 140 degrees F for a unit to be in a refueling shutdown condition has been deleted. This change allows the adoption of the standard Technical Specifications definition of Mode 6 for refueling. The Mode 6 definition would allow the maximum temperature to change from 140 to 200 degrees F, results in a shorter operator action time to prevent criticality during a boron dilution accident in the refueling condition. The 140 degree temperature is an arbitrary limit, unrelated to any analyzed event which may occur during Mode 6. While the 140 degree temperature would maintain additional subcooling margin, Technical Specifications provide appropriate controls and limitations to assure the continuity of decay heat removal. Therefore, elimination of this limit is acceptable. **CTS:** 15.01.G.03 **ITS:** DELETED

DOC Number	DOC Text
L.03 Rev. A	Proposed Section 1.03 provides specific rules for use and examples of Completion Times. This section is intended to assure consistent usage of the ITS. This change is consistent with NUREG 1431 and is administrative in nature with two exceptions. Exception 1 allows application of a 25% frequency extension to subsequent performances of Actions required to be performed more than once. This provision facilitates scheduling and performance of Actions which must be repeated. This extension is consistent with CTS 15.4.0.2 which allows for surveillance frequency extensions to routine surveillances. This exception is not contained in the CTS. Adoption of this provision makes this change less restrictive. Exception 2 allows up to a 24 hour extension in completing Required Actions which are the result of subsequent entries into the same Conditions and Required Actions based on overlapping inoperabilities. This change is expected to be an infrequently utilized provision, which will reduce the likelihood of an unnecessary plant shutdown based on overlapping inoperabilities leaving insufficient time to complete restoration actions. These revisions are being proposed consistent with NUREG-1431. **CTS:** NEW **ITS:** 1.04
L.04 Rev. D	The CTS definition of operability requires both a normal (offsite) and emergency (onsite) power source. However, in CTS 15.3.0.D, features may be considered operable provided at least one source of power is still available, the redundant feature is operable, and the unit is not in cold shutdown refueling. Section 3.8 of the ITS has incorporated specific Actions to verify that redundant components are operable in Modes 1, 2, 3, and 4 when an electrical source becomes inoperable and to declare the equipment affected by the loss of power supply inoperable when necessary. Section 3.8 of the ITS has also incorporated specific Actions in Mode 5 and 6 to declare the equipment affected by the loss of power supply inoperable when necessary. Based on these changes, the definition of operability has been revised to allow a component to be considered operable when either its normal or emergency power supply is operable. Minor editorial changes to the definition have also been proposed consistent with NUREG 1431 which do not alter the intent or application of the definition. Although the change from 'normal AND emergency power' to 'normal OR emergency power' is considered less restrictive, sufficient restrictions have been incorporated into the applicable ITS sections such that the original CTS requirements for power availability are maintained. Therefore, this change is acceptable. This revision is being proposed consistent with NUREG-1431. **CTS:** 15.01.C **ITS:** 1.01.15 OPERABILITY

DOC Number	DOC Text
L.05 Rev. D	The CTS definition of Low Power Operation requires the reactor to be critical and the power range instrumentation indicating less than or equal to 2% power. The CTS definition of Low Power Operation has been moved to ITS Table 1.1-1 as Mode 2. The ITS will define Mode 2 as; Keff greater than or equal to 0.99 with Rated thermal power less than or equal to 5%, excluding decay heat. For the reactor to be critical, Keff is greater than or equal to 0.99; (during reactor operation, Keff varies slightly around the average Keff of 1.0) accordingly, defining Mode 2 based on Keff in place of reactor critical is administrative. Any changes that are not administrative as a result of changing this definition are addressed in the Description of Change specific to the affected requirement. The CTS defines Low Power Operation based on neutron flux indication, whereas the ITS defines Mode 2 as a percent of rated thermal power excluding decay heat. Industry accepted practice for determining power level excluding decay heat is through use of indicated neutron flux (power range detectors). Neutron flux indication excludes decay heat. Accordingly, this change is administrative. Revision of defined power level for low power operation to be less than or equal to 5% of rated thermal power versus 2% is less restrictive. The purpose of establishing this limit is to define a transition point between power operation and low power operation (Mode 1 and Mode 2). Raising the transition point from 2% to 5% has negligible impact on reactor operation and is consistent with NUREG-1431. See DOC M.03. **CTS:** 15.01.L — **ITS:** DELETED **CTS:** 15.01.M — **ITS:** 1.01 T1.01-01 MODE 2
L.06 Rev. D	The CTS provides a definition of Protective Instrumentation Logic, which has been proposed for deletion from the Technical Specifications. This definition provides explanation of what a Protective Logic Channel consists of, but is not used in the context of a defined term within the CTS. This information does not establish any regulatory requirement, but rather provides a description of plant equipment/design which are not required to provide adequate protection of public health and safety. **CTS:** 15.01.E.01 — **ITS:** DELETED
L.07 Rev. D	The CTS provides a definition of Logic Channel, which has been proposed for deletion from the Technical Specifications. This definition provides explanation of what a Logic Channel consists of, but is not used in the context of a defined term within the CTS. This information does not establish any regulatory requirement, but rather provides a description of plant equipment/design which are not required to provide adequate protection of public health and safety. **CTS:** 15.01.E.02 — **ITS:** DELETED

DOC Number	DOC Text	
LA.01 Rev. D	Not used.	
	CTS:	**ITS:**
	N/A	N/A
LA.02 Rev. D	Not used.	
	CTS:	**ITS:**
	N/A	N/A
LA.03 Rev. D	The CTS definition of Refueling Operation is any operation that involves the movement of core components that could affect the reactivity of the core within the containment when the vessel head is removed. Core components which could affect the reactivity are considered to be control rods and fuel assemblies. The ITS definition of Core Alterations is "the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel." In addition to this definition, the ITS also contains specified Conditions within appropriate LCOs which address movement of irradiated fuel. Accordingly, the ITS Definition of Core Alterations in combination with specifying the applicable Condition encompassing movement of irradiated fuel, captures all aspects of the CTS definition with the exception of movement of control rods and unirradiated fuel, within the containment but not within the reactor vessel. Controls for handling of these components have been moved to the Technical Requirements Manual (TRM). Placing these details in controlled documents under 50.59 control provides adequate assurance that control will be maintained and is consistent with licensee commitments made to NUREG 0612. These controls provide assurance that an equivalent level of safety is maintained. The proposed definition also adds a provision which allows for movement of components to a safe position, should suspension of alterations become necessary as the result of a Technical Specification Action. The CTS does not contain this latitude in the definition of Refueling Operation. However, the CTS Actions allow for placing components in a safe position, therefore this addition is an administrative change.	
	CTS:	**ITS:**
	15.01.I	1.01.07 CORE ALT

DOC Number	DOC Text
LB.01 Rev. A	The CTS contains a definition of Reportable Event making specific reference to 10CFR50.73. The definition of reportable event has been deleted from the proposed ITS. This definition merely provided reference to 10CFR50.73 relative to defining conditions which are reportable. This information duplicates current regulations and is unnecessary. 10CFR50.73 provides sufficient and appropriate control of this defined term and the action required by it. These details are not required to be in the ITS to provide adequate protection of public health and safety. Since this information is duplicated in 10CFR50.73, the requirements will continue to be applicable to Point Beach. Therefore, this change is an administrative relocation of information. **CTS:** 15.01.A **ITS:** DELETED
M.01 Rev. A	The definition of hot shutdown has been moved to ITS Table 1.1-1 as Mode 3, establishing an exclusive plant condition for this operational configuration. In establishing an exclusive condition/Mode, there will be no ambiguity in the Technical Specifications regarding which Mode the unit is in, clarifying which LCO, Action, and Surveillance Requirements are applicable. The CTS definition of Hot Shutdown requires the reactor to be subcritical by an amount greater than or equal to the margin specified in Technical Specification 15.3.10 (1.0% BOL to 2.77% EOL delta K/k). As such, if shutdown margin is not greater than or equal to its required value, the unit would no longer be in Hot Shutdown leaving no other defined Condition/Mode which could be applied. Technical Specification Conditions/Modes and Actions are based upon being in a defined condition/Mode; therefore, it is clearly not the intent of the Technical Specifications to exit a condition/Mode due to exceeding an LCO limit. This change in combination with other proposed Modes and Conditions ensures that a set of established Conditions will exist to define plant Mode or Condition within the Technical Specifications in a consistent manner. In addition, the CTS defines hot shutdown as being greater than or equal to 540 degrees. The proposed ITS definition has extended the applicability of hot shutdown from greater than or equal to 540 degrees to greater than or equal to 350 degrees, resulting in entry into this condition/Mode at a lower RCS temperature threshold. This is a more restrictive change based upon earlier entry into Mode 3, establishing more stringent operational limitations. Any changes which are not administrative resulting from this change are discussed with the LCO in which the technical change has occurred. **CTS:** 15.01.G.01 **ITS:** 1.01 T1.01-01 MODE 3

DOC Number	DOC Text
M.02 Rev. A	The CTS does not contain a definition of Mode 4; however, the CTS does provide LCO Applicabilities and Actions based on unit conditions such as RCS temperature or "whenever the unit is not in cold shutdown". Mode 4 is being added to the ITS. The addition of Mode 4 to the ITS is being made to establish the use of a consistent exclusive set of Conditions/Modes so there will be no ambiguity regarding which Mode or Condition the unit is in. The CTS when specifying Action Statement shutdowns requires the unit to be placed into Hot Shutdown (ITS Mode 3) and Cold Shutdown (ITS Mode 5) within specified time limits (e.g. Hot Shutdown within 7 hours and Cold Shutdown within 37 hours). The CTS does not contain an equivalent Mode or Condition to Mode 4, which when applied to a Technical Specification required shutdown could allow the unit to remain in Mode 3 for an unspecified period of time, provided that the unit still achieves Mode 5 in less than or equal to 37 hours. Accordingly, while being proposed to establish consistently applied operational Conditions, the addition of Mode 4 represents a more restrictive change. **CTS:** NEW **ITS:** 1.01 T1.01-01 MODE 4
M.03 Rev. D	The CTS definition of Power Operation requires the reactor to be critical and the power range instrumentation indicating greater than 2% power. The definition of Power Operation has been moved to ITS Table 1.1-1 as Mode 1 and footnote (a). The ITS will define Power Operation as; Keff greater than or equal to 0.99 with Rated thermal power in excess of 5%, excluding decay heat. For the reactor to be critical and producing greater than 5% power, Keff must be greater than 0.99 (during reactor operation, Keff varies slightly around the average Keff of 1.0). The addition of a Keff requirement to the definition does not technically change the CTS definition. Therefore, defining Power Operation based on Keff is administrative. The CTS defines Power Operation based on neutron flux indication, whereas the ITS defines Power Operation as a percent of rated thermal power excluding decay heat. Industry accepted practice for determining power level excluding decay heat is through use of indicated neutron flux (power range detectors). Neutron flux indication excludes decay heat. Accordingly, this change is administrative. Revision of defined power level for power operation to be greater than 5% of rated thermal power versus 2% is more restrictive. The purpose of establishing this limit is to define a transition point between power operation and low power operation (Mode 1 and Mode 2). Raising the transition point from 2% to 5% has negligible impact on reactor operation and is consistent with NUREG-1431. See DOC L.05. **CTS:** 15.01.H **ITS:** 1.01 T1.01-01 MODE 1 1.01 T1.01-01 NOTE A

15. TECHNICAL SPECIFICATIONS AND BASES

15.1 DEFINITIONS

The definitions for frequently used terms which are applied to the Point Beach Nuclear Plant, Unit Nos. 1 and 2, are stated below.

~~A. Reportable Event~~

~~A Reportable Event shall be any of those conditions specified in Section 50.73 to Title 10 Code of Federal Regulations (10 CFR) Part 50.~~

LB.01

B. Quadrant Power Tilt

~~Quadrant to average power tilt is expressed in percent as defined by the following equation:~~

$$\cancel{100 \times \left[\frac{\text{power in any core quadrant}}{\text{average for all quadrants}} - 1 \right]}$$

Replace with Insert 1.0-01

A.17

C. Operability

OPERABLE -

A system, subsystem, train, component, or device shall be operable or have operability when it is capable of performing its function(s) ~~as analyzed in the safety analysis report~~. ~~Implicit in this definition is the assumption that~~ necessary instrumentation, controls, normal ~~and~~ emergency electrical power ~~sources~~, cooling ~~or~~ seal water, lubrication ~~or~~ other auxiliary equipment required for the system, subsystem, train, component or device to perform its function(s) are capable of performing their related support function(s).

specified safety

and when all

or

and

that are

and

specified safety

also

L.4

D

RAI 1.0-1

<See Section 3.6>

A.1

D. Containment Integrity*

Containment integrity is defined to exist when:

1) Penetrations required to be isolated during accident conditions are either:
   a. Capable of being closed by an operable automatic containment isolation valve,
      OR
   b. Closed by an operable containment isolation valve,
      OR
   c. Closed in accordance with Specifications 15.3.6.A.1.b and 15.3.6.A.1.c.
2) The equipment hatch is properly closed.
3) At least one door in each personnel air lock is properly closed.
4) The overall uncontrolled containment leakage is less than La.**

~~E. Protective Instrumentation Logic~~

~~1) Analog Channel~~

~~An analog channel is an arrangement of components and modules as required to generate a single protective action signal when required by a plant condition. An analog channel loses its identity where single action signals are combined~~.

L.6

D

RAI 1.0-5

<See Section 3.6>

* Containment isolation valves are discussed in FSAR Section 5.2.

** Prior to the first startup after performing a required Containment Leakage Rate Testing Program leakage test, the applicable leakage limits specified in TS 15.6.12.D.2 must be met.

D
RAI 1 0-5

L.7

A.1

~~2) Logic Channel~~

~~A logic channel is a group of relay contact matrices which operate in response to the analog channels signals to generate a protective action signal.~~

~~f. Instrumentation Surveillance~~

L.01

~~1)~~ Channel Check

assessment

indication and status to

Channel check is a qualitative ~~determination of acceptable operability~~ by observation of channel behavior during operation. This determination shall include, comparison of the channel ~~with~~ other independent channels measuring the same ~~variable~~.

where possible,

instrument

parameter

indications or status derived from

~~2)~~ Channel ~~Functional Test~~

OPERATIONAL TEST (COT)

A.18

~~A channel functional test consists of injecting a simulated signal into the channel to verify that it is operable, including alarm and/or trip initiating action~~.

Replace with Insert 1.0-02

~~3)~~ Channel Calibration

A.03

~~Channel calibration consists of the adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel measures. Calibration shall encompass the entire channel, including equipment action, alarm, or trip, and shall be deemed to include the channel functional test~~.

Replace with Insert 1.0-03

~~g.~~ Shutdown

~~1) Hot Shutdown~~

~~The reactor is in the hot shutdown condition when the reactor is subcritical, by an amount greater than or equal to the margin as specified in Technical Specification 15.3.10 and T_{avg} is at or greater than 540°F.~~

Add Definition of Mode Insert 1.0-06

A.04

Replaced with Mode Table Insert 1.0-04

Add Mode 4 - Hot Shutdown Insert 1.0-05

M.02

M.01

Justification For Deviations - NUREG-1431 Section 1.0

13-Dec-00

JFD Number	JFD Text
01 Rev. A	The brackets have been removed and the proper plant specific information has been provided.

ITS:	NUREG:
1.01 T1.01-01 MODE 3	1.01 T1.01-01 MODE 3
1.01 T1.01-01 MODE 4	1.01 T1.01-01 MODE 4
1.01 T1.01-01 MODE 5	1.01 T1.01-01 MODE 5
1.01.03 AFD	1.01.03 AFD
1.01.10 E- BAR	1.01.10 E- BAR
1.01.11 La	1.01.12 La
1.01.16 PHYSICS TESTS	1.01.17 PHYSICS TESTS
1.01.19 RTP	1.01.20 RTP
1.01.20 SDM	1.01.22 SDM

02
Rev. A

The ITS definition of Dose Equivalent I - 131 lists Table III of TID-14844 and Table E-7 of Reg Guide 1.109 Rev 1 as bracketed methodologies. The Point Beach current Licensing Basis for determination of Dose Equivalent has been retained. The Point Beach current Licensing Basis for determination of Dose Equivalent I -131 is Table 2.1 of Federal Guidance Report No. 11, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," September 1988. This methodology was approved for Point Beach as Amendments 173/177, issued July 1, 1997.

ITS:	NUREG:
1.01.09 DE I-131	1.01.09 DE I-131

03
Rev. A

The Definitions of ESF and RPS Response Time Testing have not been incorporated into The Point Beach ITS. ESF and RPS Response Time Testing are not part of Point Beach's current licensing basis. Accordingly, TSTF-111, R.6 was also not adopted.

ITS:	NUREG:
N/A	1.01.11 ESFAS RESPONSE TIME 1.01.21 RTS RESPONSE TIME

04
Rev. D

Not used.

ITS:	NUREG:
N/A	N/A

Justification For Deviations - NUREG-1431 Section 1.0

13-Dec-00

JFD Number	JFD Text	
05 Rev. A	The definition of TADOT has been altered to remove reference to setpoint verifications and adjustments. The definition of TADOT is only used in conjunction with functions that do not have a setpoint (e.g. manual trip, reactor trip breaker indication, interlock functions). As such, in lieu of taking exception to setpoint verification in all SR applications, a change to the Bases is more appropriate.	
	ITS:	**NUREG:**
	1.01.24 TADOT	1.01.26 TADOT
06 Rev. D	Not used.	
	ITS:	**NUREG:**
	N/A	N/A
07 Rev. D	These are editorial changes to the use and applications sections of the NUREG.	
	ITS:	**NUREG:**
	1.04	1.04
08 Rev. A	The CTS definition of shutdown margin does not require accounting for a stuck rod in the determination of shutdown margin, when the control rods are not withdrawn, while NUREG 1431 would require the highest worth rod to be accounted for regardless of control rod status. It is not necessary and overly conservative to account for failure of a control rod to insert (single failure), when all rods are inserted. Therefore, the CTS requirement to account for a stuck control rod only when rods are withdrawn, has been retained in the proposed ITS.	
	ITS:	**NUREG:**
	1.01.20 SDM	1.01.22 SDM
09 Rev. D	NUREG 1431 defines the allowable leakage from containment La in terms of Pa, where Pa is the calculated peak containment pressure. CTS defines Pa and the peak design containment pressure. The NUREG 1431 definition is being revised to be consistent with the CTS definition. The current licensing basis for PBNP is based on a definition of Pa that differs from 10 CFR 50 Appendix J. Appendix J defines Pa as the calculated peak containment internal pressure. The PBNP current licensing basis defines Pa as the containment design pressure. Therefore, Pa is conservatively established at 60 psig for PBNP, which is about 7 psig greater than the approximately 53 psig peak pressure shown in the PBNP FSAR in Section 14.3.4. To reflect the PBNP licensing basis, the ITS Bases needs to state "design" pressure vice "calculated" pressure.	
	ITS:	**NUREG:**
	1.01.11 La	1.01.12 La

1.1 Definitions

CHANNEL CHECK

A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter.

CHANNEL OPERATIONAL TEST (COT)

A COT shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify ~~the~~ OPERABILITY of ~~required alarm, interlock, display, and trip functions~~. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints ~~so~~ that the setpoints are within the ~~required~~ range and accuracy. D RAI 1.0-6

all devices in the channel required for channel OPERABILITY

required for channel OPERABILITY such

necessary

The COT may be performed by means of any series of sequential, overlapping, or total channel steps.

CORE ALTERATION

CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.

CORE OPERATING LIMITS REPORT (COLR)

The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.5. Plant operation within these limits is addressed in individual Specifications. D

Approved TSTF-205, R.3

1 → 4

DOSE EQUIVALENT I-131

DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in ~~[Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites," or those listed in Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977, or ICRP 30, Supplement to Part 1, page~~

2 → Replace with Insert 1.0-01

1.1 Definitions

PHYSICS TESTS (continued)	a. Described in Chapter 14, Initial Test Program 1 of the FSAR; or b. Authorized under the provisions of 10 CFR 50.59; or c. Otherwise approved by the Nuclear Regulatory Commission.
PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, and the LTOP arming temperature, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6. Plant operation within these operating limits is addressed in LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of ~~2893~~ 1518.5 MWt.
~~REACTOR TRIP SYSTEM (RTS) RESPONSE TIME~~	~~The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.~~
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

Approved TSTF-233

RAI 1.0-7

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

When one Function X train and one Function Y train are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each train starting from the time each train was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second train was declared inoperable (i.e., the time the situation described in Condition C was discovered).

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. The remaining Completion Time in Condition A is measured from the time the affected train was declared inoperable (i.e., initial entry into Condition A).

The Completion Times of Conditions A and B are modified by a logical connector with a separate 10 day Completion Time measured from the time it was discovered the LCO was not met. In this example, without the separate Completion Time, it would be possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. The separate Completion Time modified by the phrase "from discovery of failure to meet the LCO" is designed to prevent indefinite continued operation while not meeting the LCO. This Completion Time allows for an exception to the normal "time zero" for beginning the Completion Time "clock". In this instance, the Completion Time "time zero" is specified as commencing at the time the LCO was initially not met, instead of at the time the associated Condition was entered.

D
RAI 1.0-9

SECTION 1.0 NUREG INSERTS

INSERT 1.0-01

Table 2.1 of Federal Guidance Report No. 11, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," September 1988.

INSERT 1.0-02

Not used.

D

RAI 1.0-7

No Significant Hazards Considerations - NUREG-1431 Section 1.0

12-Dec-00

NSHC Number	NSHC Text
A Rev. 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 1.0

12-Dec-00

NSHC Number	NSHC Text
L.01 Rev. 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? This change allows for the performance of channel checks when the redundant instrument channels are not available for comparison. The method of performing a channel check is not an accident precursor, therefore, the probability for an accident is unchanged. Similarly, the method of performing a channel check has no impact on onsite or offsite releases stemming from a design basis event; therefore, the consequences of accidents previously evaluated are unchanged. 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 allow for performance of channel checks on instrumentation when the redundant channels are not available for comparison. A qualitative assessment will still be performed in this condition, providing assurance of continued channel operability, thereby fulfilling the intent of this requirement. Through this assurance, required functions are maintained; therefore, this change will 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 allow for performance of channel checks on instrumentation when the redundant channels are not available for comparison. A qualitative assessment will still be performed in this condition, providing assurance of continued channel operability. The intended purpose of a channel check will still be met; therefore, this change does not involve a significant reduction in a margin of safety.

NSHC Number	NSHC Text
L.02 Rev. 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 removal of the 140 F refueling shutdown temperature limit from the Technical Specifications does not increase the probability or consequences of any previously evaluated accident. Two analyzed accidents are associated with refueling shutdown conditions: The fuel handling accident and the boron dilution accident. The probability and consequences of the fuel handling accident are not dependent on the RCS, Refueling Canal or Refueling Cavity fluid temperature. A higher temperature does not increase the likelihood of fuel handling accident and the refueling cavity fluid decontamination factor has sufficient conservatism to accommodate fluid temperature effects. The probability of the boron dilution accident is also unaffected by the RCS, Refueling Canal or Refueling Cavity fluid temperature because this accident is initiated by dilution fluid flow. Temperature is unrelated to the consequences of the event. Therefore, the removal of the 140 F refueling shutdown temperature limit from the Technical Specifications does not increase the probability or consequences of any previously evaluated accident. 2. Does the change create the possibility of a new or different kind of accident from any previously evaluated? New or different kinds of accidents can only be created by new or different accident initiators or sequences. The proposed RCS, Refueling Canal or Refueling Cavity fluid temperature limit change does not create any new or different accident initiators or sequences. Therefore, this temperature change does not create the possibility of any new or different kind of accident. 3. Does this change involve a significant reduction in a margin of safety? The margins of safety for Point Beach are based on the design and operation of the reactor and containment and the safety systems that provide their protection. This change does not cause the reactor or containment to encroach on design and operation margins of safety. The safety systems that provide protection for the reactor and containment will continue to function in accordance with their design and operation. Therefore, the proposed removal of the 140 degree F temperature limit for refueling operation does not significantly reduce any margin of safety.

NSHC Number	NSHC Text
L.03 Rev. A	1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change involves incorporation of two new provisions into the Technical Specifications. The first provision allows application of a 25% frequency extension to subsequent performances of Actions required to be performed more than once. The second provision allows an extension of up to 24 hours in completing Required Actions which are the result of subsequent entries into the same Conditions and Required Actions based on overlapping inoperabilities. The probability for an event is independent of equipment restoration time and the repeat performance of required Actions. Neither of these are event precursors. The consequences of analyzed event are unaffected based on maintaining the availability of redundant systems and components, thereby preserving safety function. 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 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 operational configurations. 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 changes will not significantly reduce the margin of safety. Industry experience had shown that repeat Technical Specification Actions and Surveillance activities are completed satisfactorily when reperformed. The subsequent performance of repeat actions is limited to the same extension (25%) as routine surveillance actions. Based on this extension being limited to repeat performances, and that the extension is of short duration (< 25% of the base frequency) there will be no significant reduction in the margin of safety. Similarly, extensions to completing Required Actions which are the result of subsequent entries into the same Conditions and Required Actions based on overlapping inoperabilities is an infrequent operation.

NSHC Number	NSHC Text
L.04 Rev. D	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 involves a relaxation in redundant power supply requirements in the definition of operability in the Technical Specifications. However, additional restrictions are imposed in the Technical Specifications such that the original constraints on power supply are appropriately maintained. The probability of an event is independent of the availability of redundant power to equipment. Neither is this an event precursor. The consequences of analyzed events are unaffected based on maintaining the availability of redundant power supplies, thereby preserving safety function. 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 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 operational configurations. 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. The relaxation of redundant power supply requirements in the definition of operability is compensated by additional restrictions in the corresponding Technical Specifications sections such that the overall requirements for power supply redundancy are maintained.

NSHC Number	NSHC Text
L.05 Rev. D	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 raises the transition point from low power operation (Mode 2) to power operation (Mode 1). The defined transition point will rise from 2% to 5% power. Operating Mode is administratively defined; it is not an accident precursor. Therefore, the probability of an accident is unchanged. More restrictive TS limits are imposed upon reactor operation in Mode 1. These limits would be imposed at a power level of 5% vice the previous 2%. However, any additional onsite or offsite releases resulting from an accident initiated at 5% power versus 2% power is minor. Therefore, the consequences of an accident previously evaluated are insignificant. 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 only delineates a different transition point between two reactor operating modes (Mode 1 and Mode 2). Therefore, this change will not create a new or different kind of accident from any previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change establishes a different transition point between reactor operating modes (Mode 1 and Mode 2). Both the original transition point of 2% and the new transition point of 5% are based on establishing a convenient transition point from low power to power operation, where the reactor is near its minimum self-sustaining power level. The difference between these two values is minimal; therefore, this change does not involve a significant reduction in a margin of safety.

NSHC Number	NSHC Text
L.06 Rev. D	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 results in the deletion of details which are not necessary to describe the actual regulatory requirement, or provide adequate protection of the public health and safety. Accordingly, there will be no significant change in the probability or consequences of accidents 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. 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? The deletion of details which are not necessary to describe the actual regulatory requirement, or provide adequate protection of the public health and safety, does not result in a significant reduction in the margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 1.0

12-Dec-00

NSHC Number	NSHC Text
L.07 Rev. D	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 results in the deletion of details which are not necessary to describe the actual regulatory requirement, or provide adequate protection of the public health and safety. Accordingly, there will be no significant change in the probability or consequences of accidents 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. 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? The deletion of details which are not necessary to describe the actual regulatory requirement, or provide adequate protection of the public health and safety, does not result in a significant reduction in the margin of safety.

NSHC Number	NSHC Text
LA Rev. 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 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.

No Significant Hazards Considerations - NUREG-1431 Section 1.0

12-Dec-00

NSHC Number	NSHC Text
LB Rev. 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? This change involves deletion of a Specifications/information which is duplicative of information contained in the Code of Federal Regulations (CFRs). This information is more appropriately addressed by the CFRs and serves no purpose in the Technical Specifications. Deletion of this information will not result in an increase in the probability of an accident. Regulatory requirements do not alter plant design or configuration; therefore, this does not alter any event precursor. Accordingly, there will be no effect on the consequences of any accident. 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 deletes materials from the Technical Specifications which are adequately addressed in the CFRs. 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 deletes materials from the Technical Specifications which are duplicative of requirements contained in the CFRs. These items are not an input to any accident analysis and, therefore, have no impact on margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 1.0

12-Dec-00

NSHC Number	NSHC Text
M Rev. 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 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.

1.0 USE AND APPLICATION

1.1 Definitions

----------NOTE----------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state required for OPERABILITY of a logic circuit and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps.
CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other

1.1 Definitions (continued)

	indications or status derived from independent instrument channels measuring the same parameter.
CHANNEL OPERATIONAL TEST (COT)	A COT shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT may be performed by means of any series of sequential, overlapping, or total channel steps. D RAI 1.0-6
CORE ALTERATION	CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.
CORE OPERATING LIMITS REPORT (COLR)	The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.4. Plant operation within these limits is addressed in individual Specifications. D
DOSE EQUIVALENT I-131	DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table 2.1 of Federal Guidance Report No. 11, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," September 1988.
E—AVERAGE DISINTEGRATION ENERGY	E shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > 15 minutes,

1.1 Definitions (continued)

making up at least 95% of the total noniodine activity in the coolant.

L_a

The maximum allowable primary containment leakage rate, L_a, shall be 0.4% of primary containment air weight per day at the peak design containment pressure (P_a).

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank;

2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE; or

3. Reactor Coolant System (RCS) LEAKAGE through a steam generator (SG) to the Secondary System;

b. Unidentified LEAKAGE

All LEAKAGE (except RCP seal water injection or leakoff) that is not identified LEAKAGE;

c. Pressure Boundary LEAKAGE

LEAKAGE (except SG LEAKAGE) through a nonisolable fault in an RCS component body, pipe wall, or vessel wall.

MASTER RELAY TEST

A MASTER RELAY TEST shall consist of energizing all master relays in the channel required for OPERABILITY and verifying the OPERABILITY of each required master relay. The MASTER RELAY TEST shall include a continuity check of each associated required slave relay. The MASTER RELAY TEST may be performed by means of any series of sequential, overlapping, or total channel steps.

1.1 Definitions (continued)

MODE	A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE—OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in Chapter 13, Initial Test Program of the FSAR; or b. Authorized under the provisions of 10 CFR 50.59; or c. Otherwise approved by the Nuclear Regulatory Commission.
PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, and the LTOP arming temperature, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.5. Plant operation within these operating limits is addressed in LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System." D RAI 1.0-7
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to

1.1 Definitions (continued)

	the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 1518.5 MWt.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. However, it is not necessary to account for a stuck RCCA when all RCCAs are fully inserted; b. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and c. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level.
SLAVE RELAY TEST	A SLAVE RELAY TEST shall consist of energizing all slave relays in the channel required for OPERABILITY and verifying the OPERABILITY of each required slave relay. The SLAVE RELAY TEST shall include a continuity check of associated required testable actuation devices. The SLAVE RELAY TEST may be performed by means of any series of sequential, overlapping, or total channel steps.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during n Surveillance Frequency intervals, where n is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

1.1 Definitions (continued)

TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)	A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADOT may be performed by means of any series of sequential, overlapping, or total channel steps.

Table 1.1-1 (page 1 of 1)
MODES

MODE	TITLE	REACTIVITY CONDITION (k_{eff})	% RATED THERMAL POWER(a)	AVERAGE REACTOR COOLANT TEMPERATURE (°F)
1	Power Operation	≥ 0.99	> 5	NA
2	Startup	≥ 0.99	≤ 5	NA
3	Hot Standby	< 0.99	NA	≥ 350
4	Hot Shutdown(b)	< 0.99	NA	350 > T_{avg} > 200
5	Cold Shutdown(b)	< 0.99	NA	≤ 200
6	Refueling(c)	NA	NA	NA

(a) Excluding decay heat.

(b) All reactor vessel head closure bolts fully tensioned.

(c) One or more reactor vessel head closure bolts less than fully tensioned.

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability. If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of discovery of the situation that required entry into the Condition. Once a Condition has been entered, subsequent trains, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will <u>not</u> result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition.

1.3 Completion Times

DESCRIPTION (continued)

However, when a subsequent train, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

a. Must exist concurrent with the first inoperability; and

b. Must remain inoperable or not within limits after the first inoperability is resolved.

The total Completion Time allowed for completing a Required Action to address the subsequent inoperability shall be limited to the more restrictive of either:

a. The stated Completion Time, as measured from the initial entry into the Condition, plus an additional 24 hours; or

b. The stated Completion Time as measured from discovery of the subsequent inoperability.

The above Completion Time extensions do not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each train, subsystem, component, or variable expressed in the Condition) and separate tracking of Completion Times based on this re-entry. These exceptions are stated in individual Specifications.

The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery . . ." Example 1.3-3 illustrates one use of this type of Completion Time. The 10 day Completion Time specified for Conditions A and B in Example 1.3-3 may not be extended.

1.3 Completion Times

EXAMPLES

The following examples illustrate the use of Completion Times with different types of Conditions and changing Conditions.

EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	AND	
	B.2 Be in MODE 5.	36 hours

Condition B has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition B is entered.

The Required Actions of Condition B are to be in MODE 3 within 6 hours AND in MODE 5 within 36 hours. A total of 6 hours is allowed for reaching MODE 3 and a total of 36 hours (not 42 hours) is allowed for reaching MODE 5 from the time that Condition B was entered. If MODE 3 is reached within 3 hours, the time allowed for reaching MODE 5 is the next 33 hours because the total time allowed for reaching MODE 5 is 36 hours.

If Condition B is entered while in MODE 3, the time allowed for reaching MODE 5 is the next 36 hours.

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-2

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One pump inoperable.	A.1 Restore pump to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

When a pump is declared inoperable, Condition A is entered. If the pump is not restored to OPERABLE status within 7 days, Condition B is also entered and the Completion Time clocks for Required Actions B.1 and B.2 start. If the inoperable pump is restored to OPERABLE status after Condition B is entered, Condition A and B are exited, and therefore, the Required Actions of Condition B may be terminated.

When a second pump is declared inoperable while the first pump is still inoperable, Condition A is not re-entered for the second pump. LCO 3.0.3 is entered, since the ACTIONS do not include a Condition for more than one inoperable pump. The Completion Time clock for Condition A does not stop after LCO 3.0.3 is entered, but continues to be tracked from the time Condition A was initially entered.

While in LCO 3.0.3, if one of the inoperable pumps is restored to OPERABLE status and the Completion Time for Condition A has not expired, LCO 3.0.3 may be exited and operation continued in accordance with Condition A.

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-2 (continued)

While in LCO 3.0.3, if one of the inoperable pumps is restored to OPERABLE status and the Completion Time for Condition A has expired, LCO 3.0.3 may be exited and operation continued in accordance with Condition B. The Completion Time for Condition B is tracked from the time the Condition A Completion Time expired.

On restoring one of the pumps to OPERABLE status, the Condition A Completion Time is not reset, but continues from the time the first pump was declared inoperable. This Completion Time may be extended if the pump restored to OPERABLE status was the first inoperable pump. A 24 hour extension to the stated 7 days is allowed, provided this does not result in the second pump being inoperable for > 7 days.

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Function X train inoperable.	A.1 Restore Function X train to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
B. One Function Y train inoperable.	B.1 Restore Function Y train to OPERABLE status.	72 hours AND 10 days from discovery of failure to meet the LCO
C. One Function X train inoperable. AND One Function Y train inoperable.	C.1 Restore Function X train to OPERABLE status. OR C.2 Restore Function Y train to OPERABLE status.	72 hours 72 hours

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

When one Function X train and one Function Y train are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each train starting from the time each train was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second train was declared inoperable (i.e., the time the situation described in Condition C was discovered).

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. The remaining Completion Time in Condition A is measured from the time the affected train was declared inoperable (i.e., initial entry into Condition A).

The Completion Times of Conditions A and B are modified by a logical connector with a separate 10 day Completion Time measured from the time it was discovered the LCO was not met. In this example, without the separate Completion Time, it would be possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. The separate Completion Time modified by the phrase "from discovery of failure to meet the LCO" is designed to prevent indefinite continued operation while not meeting the LCO. This Completion Time allows for an exception to the normal "time zero" for beginning the Completion Time "clock". In this instance, the Completion Time "time zero" is specified as commencing at the time the LCO was initially not met, instead of at the time the associated Condition was entered.

D
RAI 1.0-9

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more valves inoperable.	A.1 Restore valve(s) to OPERABLE status.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 12 hours

A single Completion Time is used for any number of valves inoperable at the same time. The Completion Time associated with Condition A is based on the initial entry into Condition A and is not tracked on a per valve basis. Declaring subsequent valves inoperable, while Condition A is still in effect, does not trigger the tracking of separate Completion Times. Once one of the valves has been restored to OPERABLE status, the Condition A Completion Time is not reset, but continues from the time the first valve was declared inoperable. The Completion Time may be extended if the valve restored to OPERABLE status was the first inoperable valve. The Condition A Completion Time may be extended for up to 4 hours provided this does not result in any subsequent valve being inoperable for > 4 hours.

If the Completion Time of 4 hours (including the extension) expires while one or more valves are still inoperable, Condition B is entered.

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-5

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each inoperable valve.

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

The Note above the ACTIONS Table is a method of modifying how the Completion Time is tracked. If this method of modifying how the Completion Time is tracked was applicable only to a specific Condition, the Note would appear in that Condition rather than at the top of the ACTIONS Table.

The Note allows Condition A to be entered separately for each inoperable valve, and Completion Times tracked on a per valve basis. When a valve is declared inoperable, Condition A is entered and its Completion Time starts.

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-5 (continued)

If subsequent valves are declared inoperable, Condition A is entered for each valve and separate Completion Times start and are tracked for each valve.

If the Completion Time associated with a valve in Condition A expires, Condition B is entered for that valve. If the Completion Times associated with subsequent valves in Condition A expire, Condition B is entered separately for each valve and separate Completion Times start and are tracked for each valve. If a valve that caused entry into Condition B is restored to OPERABLE status, Condition B is exited for that valve.

Since the Note in this example allows multiple Condition entry and tracking of separate Completion Times, Completion Time extensions do not apply.

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-6

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel inoperable.	A.1 Perform SR 3.x.x.x. OR A.2 Reduce THERMAL POWER to ≤ 50% RTP.	Once per 8 hours 8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours

Entry into Condition A offers a choice between Required Action A.1 or A.2. Required Action A.1 has a "once per" Completion Time, which qualifies for the 25% extension, per SR 3.0.2, to each performance after the initial performance. The initial 8 hour interval of Required Action A.1 begins when Condition A is entered and the initial performance of Required Action A.1 must be complete within the first 8 hour interval. If Required Action A.1 is followed, and the Required Action is not met within the Completion Time (plus the extension allowed by SR 3.0.2), Condition B is entered. If Required Action A.2 is followed and the Completion Time of 8 hours is not met, Condition B is entered.

If after entry into Condition B, Required Action A.1 or A.2 is met, Condition B is exited and operation may then continue in Condition A.

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-7

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Verify affected subsystem isolated.	1 hour AND Once per 8 hours thereafter
	AND	
	A.2 Restore subsystem to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	AND	
	B.2 Be in MODE 5.	36 hours

Required Action A.1 has two Completion Times. The 1 hour Completion Time begins at the time the Condition is entered and each "Once per 8 hours thereafter" interval begins upon performance of Required Action A.1. If after Condition A is entered, Required Action A.1 is not met within either the initial 1 hour or any subsequent 8 hour interval from the previous performance (plus the extension allowed by SR 3.0.2), Condition B is entered. The Completion Time clock for Condition A does not stop after Condition B is entered, but continues from the time Condition A was initially entered. If Required Action A.1 is met after Condition B is entered, Condition B is exited and

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-7 (continued)

operation may continue in accordance with Condition A, provided the Completion Time for Required Action A.2 has not expired.

IMMEDIATE COMPLETION TIME

When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.