November 6, 2000

Mr. Mark Reddemann
Site Vice President
Point Beach Nuclear Plant
Nuclear Management Company, LLC
6610 Nuclear Road
Two Rivers, WI 54241

SUBJECT: POINT BEACH NUCLEAR POWER PLANT, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION RE: SECTION 3.7 OF IMPROVED TECHNICAL SPECIFICATIONS CONVERSION (TAC NOS. MA7186 AND MA7187)

Dear Mr. Reddemann:

By letter dated November 15, 1999, the licensee submitted a license amendment request to convert the current Technical Specifications to improved Technical Specifications for Point Beach, Units 1 and 2.

The enclosed request was discussed with Mr. Jack Gadzala during a conference call on September 20, 2000. A mutually agreeable target date of 60 days from the date of this letter for your response was established. If circumstances result in the need to revise the target date, please contact me at (301) 415-1355 at the earliest opportunity.

Sincerely,

/RA/

Beth A. Wetzel, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

POINT BEACH NUCLEAR POWER PLANT (PBNP), UNITS 1 AND 2

SECTION 3.7 OF IMPROVED TECHNICAL SPECIFICATIONS CONVERSION

STS (ITS) 3.7.1, Main Steam Safety Valves (MSSVs)

3.7.1-1 DOC M1
CTS 15.3.4.A.1
ITS 3.7.1 Applicability

CTS 15.3.4.A.1 states all eight MSSVs are required to be available when the reactor coolant is heated above 350°F and taken critical, except for low power physics testing. The ITS 3.7.1 Applicability is during Modes 1, 2 and 3 without any exception for low power physics testing. DOC M.1 is incomplete because the removal of the exception for low power physics testing is not discussed or explained as a part of this CTS change.

Comment: Revise the submittal with a technical justification for deleting the MSSV Applicability exception for low power physics testing.

Licensee Response:

3.7.1-2 Not used

3.7.1-3 Not used

3.7.1-4 Not used

3.7.1-5 Not used

3.7.1-6 Not used

3.7.1-7 TSTF 235, Revision 1
ITS 3.7.1 Required Action B.1
ITS Table 3.7.1-1
ITS 3.7.1 Bases: Background discussion/LCO discussion
JFDs 5 and 7

ITS deviates from STS 3.7.1, as revised by TSTF-235, Rev. 1, as follows.

(1) Required Action B.1 uses “power” instead of the defined term, “THERMAL POWER.”

(2) Table 3.7.1-1 contains a row corresponding to the maximum allowable power when no MSSVs are inoperable.

(3) The Bases Background discussion omits the STS’s final sentence regarding staggered MSSV lift setpoints. (JFD 7)

(4) The Bases LCO discussion retains a sentence in the first paragraph that was deleted by TSTF 235, Rev. 1, and omits other clarifications. The third paragraph is not moved to the Bases for SR 3.7.1.1.

The submittal, including JFDs 5 and 7, either does not explain or does not technically justify these deviations.

Comment: Revise the referenced requirements and Bases to conform to the STS and TSTF-235, Rev. 1.

Licensee Response:

STS (ITS) 3.7.2, Main Steam Isolation Valves (MSIVs) and Non-Return Check Valves

3.7.2-1 Not used

3.7.2-2 **DOC LB2**
CTS 15.4.7.B

CTS 15.4.7.B requires testing the non-return check valves during plant shutdowns for major fuel reloadings. ITS 3.7.2 does not provide a Surveillance Requirement for testing these valves.

(1) JFD LB2 states an SR for non-return check valves would be redundant to testing already required under the current IST Program which occurs instead on a Cold Shutdown Frequency. This implies that the CTS is redundant also. Why is the CTS SR not consistent with the current IST Program? The MSIVs and the non-return check valves are all ASME Class 2 valves with the same CTS test requirement and they operate concurrently to isolate the steam generator. It is inconsistent to require no SR for the non-return check valves when ITS SR 3.7.2.1 is specified for the MSIVs.

Comment: Retain the CTS SR for the non-return check valves with the following suggested wording: “Verify each main steam non-return check valve can close.” The Frequency would be the same as for ITS SR 3.7.2.1. This suggestion is similar to Ginna’s ITS SR 3.7.2.2 for the non-return check valves.

(2) In accordance with Bases Insert B 3.7.2-6, the Operability of the LCO is based upon the capability of the non-return check valve "to close upon reverse flow." Explain how the unique requirement to verify if the non-return check valve "can close upon reverse flow" is defined for inclusion into the IST and how this is accomplished?

Licensee Response:

3.7.2-3 Beyond-Scope Item 67
DOCs L1, M1, M2, M4, and M5
JFDs 1 and 4
CTS 15.3.4.D
ITS 3.7.2 Applicability and Actions A, B, C, and D

This RAI is a placeholder. The technical review branch may offer comments in addition to the following comments. All comments within the scope of this beyond-scope item should be answered jointly.

CTS 15.3.4.D requires any inoperable open main steam stop valve or non-return check valve to be restored to Operable status within 4 hours, otherwise, the reactor must be placed in Hot Shutdown (ITS Mode 3 above 540°F) in the following 6 hours. ITS 3.7.2 Actions permit more than one valve to be open and inoperable for 8 hours in Mode 1 before requiring entry into Mode 2 in 6 hours. While in Modes 2 and 3, the Actions require maintaining closed both of the valves in a flow path with one or both valves inoperable.

(1) CTS Insert 3.7.2-2 for Condition C does not match ITS Insert 3.7.2-2 for Condition C because the <u>OR</u> logical connect statement is missing. Also, Required Action C.3 in the CTS markup does not match the ITS markup.

Comment: Revise the CTS insert or ITS insert as appropriate to correct these errors.

(2) The separate Condition entry note to Condition C should be on a flow-path basis, not a valve basis. This is because the MSIV and the non-return check valves seem to always operate concurrently. The only way to close a non-return check valve is to first close the associated MSIV which stops the flow, and conversely, closing an MSIV also closes the associated non-return check valve.

Comment: Revise the note to read “Separate Condition entry is allowed for each Steam Generator flowpath.”

(3) The non-return check valve has nothing to deactivate, so Required Action C.3 is imprecise.

Comment: Revise the language of Required Action C.3 to read “In the affected flow path, verify the MSIV and the non-return check valve are closed and the MSIV is deactivated.”

(4) DOC L1 states the time to reach MODE 3 is ultimately increased from 10 to 24 hours. Also, JFD 1 should speak of the 8-hour Completion times as being adopted, not retained.

Comment: Revise the submittal as noted and explain how you arrived at 24 hours.

Licensee Response:

3.7.2-4 TSTF 289 & STS SR 3.7.2.2 Note
DOC M3 and JFD 7
CTS 15.4.7.A and Table 15.4.1-2, item 13
ITS SR 3.7.2.2

CTS 15.4.7.A requires stroke-testing the MSIVs under low flow conditions and CTS Table 15.4.1-2, item 13 requires testing the MSIV containment isolation trip function at each refueling shutdown. ITS SR 3.7.2.1 and ITS SR 3.7.2.2 retain these CTS requirements and almost conform to the STS as revised by TSTF 289 (approved 7/16/98). However, in TSTF 289, STS SR 3.7.2.2 contains a note which says the surveillance is "Only required to be performed in MODES 1 and 2." JFD 7 does not explain this omission.

Comment: Adopt the SR note (consistent with plant design limitations) with appropriate explanatory language in the Bases (even though the STS fails to include such explanation) and discuss the SR note in DOC M3, or justify the SR note's omission in JFD 7.

Licensee Response:

3.7.2-5 DOC LA1
CTS 4.7.A
ITS SR 3.7.2.1

Procedural details contained in the CTS for stroke time testing of MSIVs may well be in plant procedures, but designating the removal of this information from the CTS as an LA-type change is incorrect. The change is actually an L-type change involving the deletion of this information. If you keep the LA designation, then the details must be placed in a licensee-controlled document governed by a regulation such as 10 CFR 50.59, or by a TS. Given the significance of the information, staff recommends placing it in the IST program.

Comment: Revise the submittal to change the designation for this change to an L-type change, or commit to locate the information in a licensee-controlled document governed by regulation or TS (you must state the specific governing requirement).

Licensee Response:

<u>STS (ITS) 3.7.3, Main Feedwater Isolation</u>

3.7.3-1 Not used

3.7.3-2 Beyond-Scope Item 68
DOCs M1, M2, and M3
JFD 1
ITS 3.7.3 LCO, Actions A, B and C, and SRs 3.7.3.1, 3.7.3.2, and 3.7.3.3
CTS Table 15.4.1-1, Functional Unit #17
CTS Table 15.4.1-2, Item 13

This RAI is a placeholder. The technical review branch may offer comments in addition to the following comments. All comments within the scope of this beyond-scope item should be answered jointly.

The CTS requirements for main feedwater isolation have been modified to add new operability and surveillance requirements for the Containment Pressure Condensate Isolation (CPCI) circuit and pumps.

(1) DOC M2 states the justification for presentation of the Required Actions and associated Completion Times are the same as presented in DOC L1 which does not exist or is not provided in this submittal.

Comment: Clarify where the justification may be found.

(2) Condition C may involve more than one inoperable and unisolated MFRV or bypass valve. It may also involve more than one operating pump with an inoperable trip circuit. Thus, Required Action C.1 should use “valves” instead of “valve,” and C.2 should use “circuits” instead of “circuit.”

(3) It is inferred from the ITS Bases that ITS SR 3.7.3.1 does not include a containment isolation trip function test for valves like the MFRV and associated bypass valves at each refueling shutdown. Explain why this is so given that CTS Table 15.4.1-2, item 13 seems to specify this test.

Licensee Response:

3.7.3-3, 4 not used

<u>STS (ITS) 3.7.4, Atmospheric Dump Valves (ADVs)</u>

3.7.4-1 Beyond-Scope Items 69 and 70
DOCs L2 and M1
DOC LB1
JFDs 3, 6 and 9
CTS Table 4.1-2, Item 28
ITS SR 3.7.4.1 and SR 3.7.4.2

This RAI is a placeholder. The technical review branch may offer comments in addition to the following comments. All comments within the scope of beyond-scope items 69 and 70 should be answered jointly.

(1) CTS Table 15.4.1-2, Item 28 specifies ASME Section XI component test/cycling requirements which appear not to be retained in the ITS or under any TS control. ITS SR 3.7.4.1 and ITS 3.7.4.2 only apply to manual operation of the ADV and ADV block valves.

Comment: (a) Not used; (b) It seems JFD 9 and LB1 conflict with each other regarding ASME Section XI test applicability for the ADV and ADV block valves. Resolve this inconsistency.

(2) As noted in the CTS Bases (bottom of page 15.3.4-2b) and Bases Background discussion Insert B 3.7.4-6, the ADVs must be capable of being locally or remotely opened "within the time required by the applicable FSAR analysis." Additionally, the Bases LCO discussion states a closed block valve does render it or the ADV inoperable if "operator action time to open the valve is supported in the accident analysis."

Comment: Revise the Bases to state explicitly the FSAR time limitation associated with ITS SRs 3.7.4.1 and 3.7.4.2 to verify ADV and ADV block valve operability under remote manual operation.

(3) In an evaluation of the CTS Table 15.4.1-2, Item 28, for atmospheric steam dumps, it is not clear that the quarterly test applies only to the ADVs; it may have also included the ADV block valves. What good is a quarterly test of the ADV remote operation if there is not similar testing for the block valve? Without testing, there may be insufficient assurance that the associated block valve can be opened once it is closed.

Comment: Confirm that the IST program includes a cycle test of the ADV block valves, as well as the ADVs every 92 days.

Licensee Response:

3.7.4-2 CTS 3.4.A.5
ITS 3.7.4 Required Action A.1, Note

CTS 3.4.A.5 specifies if either ADV line is inoperable for 24 hours, then the unit is placed in Hot Shutdown in 6 hours and Cold Shutdown in 24 hours. When one required ADV line is inoperable, ITS 3.7.4 Required Action A.1 requires it must be restored Operable in 7 days and an associated note says the requirements of LCO 3.0.4 are not applicable. The addition of the note to Required Action A.1 is not justified by a DOC.

Comment: Provide this missing DOC. (It is recognized that the STS Bases for the note does not justify it either.)

Licensee Response:

3.7.4-3 not used

STS (ITS) 3.7.5, Auxiliary Feedwater (AFW) System

3.7.5-1 DOC A5 and JFD 11
CTS 3.4.A.2 and 4
ITS 3.7.5

CTS 3.4.A.2 and 4 provide the Operability requirements for the AFW pumps together with their associated flow paths (which includes piping and valves directly required to function during the accident) and essential instrumentation during two unit and single unit operation. ITS 3.7.5 refers to the AFW pumps, associated flows paths and instrumentation as the AFW "pump systems" to be Operable.

(1) The removal of details of what constitutes an Operable AFW system from CTS 3.4.A.2 and 4 to the Bases is an LA-type less-restrictive change to the CTS.

Comment: Revise the submittal with a suitable LA-type justification for this change. Note that this error in characterization may be typical of similar errors throughout the submittal.

(2) This is a placeholder for beyond-scope item 72, AFW system nomenclature change. The STS uses the word convention of AFW "trains" for this LCO and in most other places throughout the STS. The ITS adopts "pump systems," which is new terminology for Point Beach that uses "trains" (See for example CTS Table 15.4.1-1, Note 23). JFD 11 states JFD 1 discusses the terminology change; however, there is no specific discussion on the terminology change.

Comment: This item is open pending technical branch disposition.

Licensee Response:

3.7.5-2 Not used

3.7.5-3 Not used

3.7.5-4 DOC M2
CTS 3.4.C.2
ITS 3.7.5 Action D

When the AFW System is outside the CTS requirements with two AFW pumps inoperable, CTS 3.0.B requires the unit placed in Hot Shutdown (Mode 3) in 7 hours and in Cold Shutdown (Mode 5) in 37 hours. ITS 3.7.5 Action D specifies the same Conditions but permits the unit to be in Hot Standby (Mode 3) in 6 hours and in Hot Shutdown (Mode 4) in 18 hours.

Comment: The final Mode required by the CTS Actions is Cold Shutdown (Mode 5) versus the final Mode required by the ITS Required Action is Mode 4. The shorter time to reach Mode 4 is of lessor comparative importance, as having to cool the reactor to Mode 5 which is a far greater

operational cost penalty and it is well below the Applicability temperature range of the CTS LCO. By adopting the STS, this is a less-restrictive change. Revise the CTS markup and provide a L-type DOC.

Licensee Response:

3.7.5-5 not used

3.7.5-6 DOC LB1 and LA2
CTS 4.8.1.c
ITS 3.7.5 Bases background

CTS 4.8.1.c specifies that the AFW pump discharge valves and the service water supply valves on the suction side will be tested quarterly. ITS 3.7.5 has not retained these explicit requirements.

Comment: Clarify that these testing requirements are covered by an appropriate SR in the ITS and are contained in the PBNP IST program, described in Section 5 of the ITS.

The ITS Bases background discussion describes the air-operated back-pressure control valves. Clarify that these valves are also tested in accordance with the ASME Code Section XI and with the IST Program.

Comment: Is the testing of these valves covered by an appropriate SR in the ITS as performed under the IST Program?

Licensee Response:

3.7.5-7 DOC LA3
CTS 4.8.2 and CTS Bases

CTS 4.8.2 and CTS Bases state that for AFW "The tests shall be considered satisfactory if control board indication and subsequent visual observation of the equipment demonstrate that all components have operated properly." These requirements are not retained in the ITS.
It is acceptable to move this CTS requirement from the TS if this requirement is located in the Bases or other licensee-controlled document with a TS or regulation-based change control process, such as the Bases Control Program or 10 CFR 50.59.

Comment: Revise DOC LA3 to state the new location and change control process for these procedural criteria, otherwise, justify their deletion with an L-type DOC. Also, revise the CTS markup as appropriate.

Licensee Response:

3.7.5-8 DOC L5 and JFD 19 & 18
CTS 4.8.1.b and Table 4.1-1, Item 20, Note 13
ITS SR 3.7.5.2, ITS SR 3.7.5.4, Notes & SR 3.7.5.5, Frequency Note

CTS 15.4.8.1.b states if the AFW turbine-driven pump "test comes due when not at power operation, the test shall be performed during the subsequent startup within 24 hours of entering power operation." STS SRs have a note which states "Not required to be performed...until 24 hours after ≥ [1000] psig in the steam generator." ITS SRs 3.7.5.2 and 3.7.5.4 have a note which states "Not required to be performed...until 24 hours after Thermal Power reaches ≥ 5% RTP."

This comment is a placeholder for beyond-scope item 73. It remains open pending technical branch disposition. In addition to technical branch comments, respond to the following:

(1) DOC L5 does not contain a technical justification for this CTS change; however, JFD 19 states in the third paragraph that a potential excessive RCS cooldown may result if the pump testing in ITS SR 3.7.5.2 and ITS SR 3.7.5.4 continues too long. Also, the fourth paragraph states that since the ITS SR 3.7.5.5 test is shorter in duration and it can be performed "at a lower power level than proposed." The critical and most direct parameter for this test is the specific steam pressure at which each test must be performed rather than relating this test parameter to an indirect minimum power level. Revise the submittal to state what is the minimum plant specific steam test pressure to be met in these notes. Also, the DOC and JFD do not state that the notes are exceptions to ITS SR 3.0.4 to permit Modes changes to reach these test conditions.

(2) Per the JFD 19 change proposed for the Frequency Note in ITS SR 3.7.5.5, there should be consistency with comment (1) above. This means that the test steam pressure selected should be directly related to a specific Mode 1 or 2.

Licensee Response:

3.7.5-9 JFD 14, JFD 16
CTS 4.8
ITS SR 3.7.5.1 and ITS SR 3.7.5.3

The CTS requirements have been modified by adopting the STS in proposed ITS SR 3.7.5.1 which "Verifies each ~~AFW~~ manual, power operated, and automatic valve in each flow path ...that is not locked, sealed, or otherwise secured in position, is in the correct position.

(1) The reasoning in JFD 14 for omitting "AFW" is logical but is not an acceptable solution to the perceived problem. It is appropriate to identify AFW as the system in which the flow path valves are to be checked in this SR.

Comment: Suggest adding “AFW” before the words water and steam, in addition to the omission. The Bases should clearly explain that certain main steam and service water valves are included in the scope of SR 3.7.5.1. Why is a similar omission not proposed for SR 3.7.5.3?

(2) JFD 16 states the "testing of other automatic valves not designated as AFW valves, but required to support AFW systems, are addressed in ITS SR 3.7.5.4."

Comment: Revise the Bases of ITS SR 3.7.5.4 to describe all valves other than AFW system valves that are tested during performance of SR 3.7.5.4. Does this include the back pressure control?

Licensee Response:

3.7.5-10 not used

3.7.5-11 not used

3.7.5-12 DOC M6
CTS 4.8
ITS SR ~~3.7.5.3~~ 3.7.5.2

The CTS requirements have been modified by adopting the STS as proposed in ITS SR ~~3.7.5.3~~ 3.7.5.2 which states that "AFW pump will develop its required head at the flow test point" when tested according to the IST program.

Comment: This CTS change is acceptable; however, DOC M6 contains a justification based upon the contents of DOC A7 that is not provided in the submittal. Revise the DOC M6 or provide DOC A7.

Licensee Response:

3.7.5-13 not used

3.7.5-14 CTS 3.4.A and C
ITS 3.7.5 Action D

The CTS requirements have been modified by adopting the STS as proposed in ITS Action D which provides Required Actions for placing the unit(s) in operating conditions outside of the LCO Applicability rather than per the CTS, which places the unit(s) in an orderly shutdown per LCO 3.0.3.

Comment: This is a less-restrictive change as is noted in RAI 3.7.5-4 for DOC M2. There are no specified CTS requirements for a simultaneous shutdown requirement for both units which comes from this new Action D. CTS 3.0.B or ITS LCO 3.0.3 could be applicable. To avoid confusion, it is appropriate to add a note to the column of Required Actions to clarify this potential situation. The Note is "If both units require simultaneous entry into Action D, each unit may be sequentially placed in Mode 3 within [12] hours or less; and entry in Mode 4 depends upon satisfying the Conditions of Action F." The reason for this note is to not prescribe too harsh actions that could jeopardize the timely yet orderly shutdown of both units. The ITS Bases will describe the technical justification for this note and give guidance, for example, that if one unit is already four hours into a Mode 3 shutdown, that the second unit must be shutdown in less than 8 hours [2 hours remaining plus 6 permitted] or in other words 6 hours immediately

after placing the first unit in Mode 3. Revise the CTS and ITS markups, DOCs and JFDs as appropriate to add this new Note - or explain why such a note is unnecessary.

Licensee Response:

3.7.5-15 JFD 16
CTS 4.8 Bases

CTS 4.8 Bases at the top of page CTS page 15.4.8-2 states that "the ability to both open and shut the turbine-driven AFW pump motor-operated steam admission valves will be demonstrated since these valves serve as isolation boundaries should a steam generator tube rupture occur." This CTS requirement is not identified in the ITS as being demonstrated.

Comment: JFD 16 states that during performance of ITS SR 3.7.5.4 these valves will be opened to test the automatic start of the pump. There is no location given for testing the automatic closure of these valves with the specified time limit when activated by a containment isolation signal. Provide an explanation of how this Operability requirement for these valves is retained with the ITS.

Licensee Response:

STS (ITS) 3.7.6, Condensate Storage Tank (CST)

3.7.6-1 DOC L1 and JFD 5
CTS 3.4.A.3
ITS 3.7.6 Action A

CTS 3.4.A.3 does not contain Compensatory actions when the condensate storage tank is inoperable. ITS 3.7.6 Action A is proposed; however, it does not follow the guidance of the STS.

Comment: DOC L.1 states that PBNP intends to perform all the requirements of the STS Required Action A.1; however, JFD 5 states these actions are unnecessary to be adopted in the ITS. Adoption of the STS will not result in new plant equipment or require new safety analyses and will not cause undue hardship. Therefore, JFD 5 is not accepted and the 7-day Completion Time is accepted provided the licensee adopts the STS.

Licensee Response:

3.7.6-2 not used

3.7.6-3 CTS 3.4.A.4
ITS 3.7.6

CTS 3.4.A.4 specifies that the system piping and valves required to function during accident conditions directly associated with the Condensate Storage Tank must be Operable. These Operability requirements appear to be not contained in ITS 3.7.6.

Comment: There is no administrative DOC or "LA" DOC provided to explain which of the CTS 15.3.4.A.4 requirements are applicable to the condensate storage tank? Why are these

Operability requirements not identified in the ITS bases discussion of the LCO? Example: The Condensate Storage Tank may not drain properly if the tank vents or piping valves are not Operable. Define the CST Operability requirements and provide the technical justification for this CTS change.

Licensee Response:

STS (ITS) 3.7.7, Component Cooling Water (CC) System

3.7.7-1 not used

3.7.7-2 DOC M1, DOC LA1 and JFD 1
CTS 3.3.C.1.c
ITS LCO 3.7.7 and associated Bases

For CC Operability, CTS 3.3.C.1.c includes additional requirements for all valves, interlocks and piping associated with CC pumps and heat exchangers. ITS LCO 3.7.7 defines the CC Operability requirements for only CC pumps, CC heat exchangers, and the nonessential load automatic isolation valves.

This comment is a placeholder for beyond-scope item 74. It remains open pending technical branch disposition. In addition to technical branch comments, respond to the following:

(1) PBNP has chosen not to adopt the STS convention of specified CC trains; however, the ITS does not retain all of the CTS Operability requirements in the LCO statement. The explicit operability requirement for all valves, interlocks and piping associated with the pumps and heat exchangers is omitted from the ITS LCO and moved to the Bases. As long as the inoperability of any component or pipe run in the CC system may be associated with the inoperability of a CC system load, pump, or heat exchanger, the proposed format appears to work. However, the train approach is preferable.

(2) Also, CTS markup insert 3.7.7-1 omits the words “required” and “automatic” in describing the nonessential isolation valves in the LCO statement and associated note. These words are contained in the STS markup and in the proposed ITS LCO.

(3) Describe the arrangement of the automatic nonessential load isolation valves in the Unit 2 CC system and their motive power and electrical power sources.

(4) Clarify in the Bases which heat exchangers the LCO requires to be Operable for both single unit and dual unit operation, and also that a common heat exchanger can be in operation on one unit while serving as the standby in the other unit, as long as there are three operable heat exchanger between the units, and that operation of a common heat exchanger cannot occur on both units simultaneously.

(5) Action C should stipulate that isolation of the “affected” flowpath should require closure of both supply and return valves for complete isolation of the non-seismic piping; or there should be a note requiring isolation on a per valve basis; i.e., separate condition entry.

(6) An inoperable isolation valve represents a flow capacity concern because of the non-seismic pipng. Thus it would seem appropriate to specify an action of shorter duration than 72 hours in the event a valve and a pump are concurrently inoperable, say 24 hours.

(7) What happens to each CCW pump in the event of an SI signal but offsite power remains?

Licensee Response:

3.7.7-3 not used

3.7.7-4 not used

3.7.7-5 **JFD 1**
CTS 3.3.1.c
STS SR 3.7.7.3

CTS 3.3.1.c requires the CC pumps to be Operable and to function during accident conditions such as "loss of power." There is no ITS SR requirement.

Comment: STS SR 3.7.7.3 or the equivalent has not been adopted. There is no SR to verify the restart capability of each operating CC pump immediately upon restoration of AC power. Similarly, there is no SR for the manual start capability of each CC pump that is in standby mode upon restoration of AC power. Modify the ITS to add a new SR 3.7.7.3.

Licensee Response:

<u>STS (ITS) 3.7.8, Service Water (SW) System</u>

3.7.8-1 **ITS 3.7.8 & Bases**

The Bases of ITS 3.7.8 requires certain header and non-essential load isolation valves to be Operable, but never states these valves by number or how many there are. The Bases would be improved by including these design details. Also, LCO 3.7.8 fails to explicitly require the operability of the ring header isolation valves, but it should. For Action F, the Bases should state the allowed configurations to ensure adequate flow to required equipment.

Comment: Revise the LCO and Bases accordingly.

3.7.8-2 **DOC A6, LA1 and JFD 1**
CTS 3.3.D.1.a and b
ITS 3.7.8 LCO

CTS 3.3.D.1.a and b states six SW pumps are Operable and all necessary valves, interlocks and piping required during accident conditions is also Operable. STS 3.7.8 requires SW trains to be Operable with details located in the Bases. ITS 3.7.8 requires six SW pumps, the SW ring header, and the automatic non-essential SW load isolation valves.

This comment is a placeholder for beyond-scope items 75 & 76. It remains open pending technical branch disposition. In addition to technical branch comments, respond to the following:

(1) PBNP has chosen to not adopt the STS approach to SW trains being maintained Operable. For ITS LCO 3.7.8 to be acceptable, however, the listing of SW components required Operable must be complete and must include the Operability of the "SW ring header flow path isolation valves." In addition, ITS LCO 3.7.8 differs from the DOC A.6 justification because DOC A.6 does not specify the "SW ring header is Operable" but specifies "one continuous service water loop." These SW ring header flow path isolation valves establish a critical feature of the Operability of the SW ring header when a continuous loop header is not possible. This occurs due to closure of any SW ring header flow path isolation valve. This condition is specified in the third paragraph, third sentence of CTS Bases page 15.3.3-10; yet, this explicit definition of SW ring header operability is not fully discussed in the ITS Bases discussion of the LCO and therefore, it would not be permitted in the ITS under the current ITS proposal. DOC A9 assumes this is permitted as is noted in the third and fourth sentences.

Comment: (a) Item b of the ITS Bases discussion of LCO should be revised to something like: "the SW ring header and SW ring header flow path isolation valves shall be Operable to provide a continuous flow path that is not interrupted. The SW ring header may still be Operable when any SW ring header flow path isolation valves are closed, if the capacity to provide 100 percent redundant flow is maintained to all safety-related loads while the isolation valves are closed in response to isolate any potential loss of cooling flow (break) in the SW ring header loop."
(b) ITS 3.7.8 Actions C and F imply that the ring header is inoperable in the event one or more header isolation valves are closed. Required Action F.1, to ensure capability to supply adequate flow to required equipment, is a remedial action which limits the reduction in system capability to an acceptable level (allowing plant operation to continue for up to the time limit of Action B), but does not restore operability of the ring header. Thus the statement in DOC A6 that “continuous ring header operability is defined as maintaining break isolation capability and the ability to maintain cooling capability to required safety loads” seems incorrect.

(2) DOC LA.1 appears to contradict DOC A.6 in that most details of the Operability of the SW System are contained jointly in the LCO and Bases, rather than totally moved only to the Bases. DOC A.6 and DOC LA.1 should be combined. The DOCs and CTS markups should be revised to correctly identify which DOCs apply to the noted CTS changes.

(3) Paragraph three of Bases page 15.3.3-10 should be included in the ITS Bases discussion of Action C.

Licensee Response:

3.7.8-3 not used

3.7.8-4 not used

3.7.8-5 **JFD 5**
CTS 3.3.D
ITS 3.7.8 Action Note

CTS 3.3.D requirements have been modified by ITS 3.7.8 Action Note. JFD 5 proposes to move the two STS Condition A Notes for LCO 3.8.1 and LCO 3.4.6, to be generically applicable to all Actions. This is acceptable if it is modified to read "Enter applicable Conditions and required Action of any applicable LCO for those systems made inoperable by SW System." In

addition, the ITS Bases discussion of Action Notes should list all LCOs for systems that may be made inoperable from inadequate SW flow.

Comment: Revise the Actions Note and associated Bases as suggested.

Licensee Response:

3.7.8-6 DOCs M4 and LA2
CTS 3.3.D.2.c and d
ITS 3.7.8 and Bases

CTS 3.3.D.2.c and d contain specific requirements that are not retained in the proposed ITS 3.7.8 or Bases.

(1) DOC A10 states that the usage of a seismically qualified isolation valve to isolate the affected penetration has been moved to the ITS Bases as is discussed in DOC LA2. However, the submittal does not contain a DOC LA2 for this specification. Also, there are no text additions found in the ITS Bases for Condition H.1 and H.2, as is implied by the DOC A10.

Comment: Provide the missing technical justifications for this CTS change that is identified on the CTS markup page 15.3.3-6.

(2) JFD 2 states that the proposed addition of Action G which retains CTS 3.3.D.2.c and d, is a more-restrictive technical change that is discussed in DOC M4. This appears to be an administrative change; however, the submittal does not contain a DOC M4 for this specification.

Comment: Provide the missing technical justifications for this CTS change to further enable an evaluation of this CTS change.

Licensee Response:

3.7.8-7 DOCs A6 and M3
CTS 3.3.D.2.d

CTS 3.3.D.2.d permits the containment fan cooler outlet valves to be open for up to 72 hours provided 5 SW pumps are Operable. The ITS does not contain a Surveillance requirement to verify if the opposite unit's containment accident fan cooler SW isolation valves are closed.

This comment is a placeholder for beyond-scope items 75 and 76. It remains open pending technical branch disposition. In addition to technical branch comments, respond to the following:

(1) Per DOC M3, ITS SRs 3.7.8.1, 2, and 3 are acceptable. DOC A6 states that the submittal contains a proposed ITS SR 3.7.8.2 which requires that the opposite unit's containment accident fan cooler SW isolation valves are verified closed. The CTS had no previous specific SRs, therefore, DOC M.3 justifies the addition of all new SRs; however, the specific ITS SR 3.7.8.2, as noted in DOC A.6, is not provided. This verification is not performed under ITS SR 3.7.8.1 because, as it is written, only the SW flow path to the safety-related load branch is periodically confirmed. Therefore, a new SR similar to ITS SR 3.7.8.1 is appropriate. Provide the missing SR.

(2) The CTS markup is incomplete because CTS Bases page 15.3.3-11 is missing. Revise the submittal to add this page and include both paragraphs into the ITS Bases discussion of Action C and E.

(3) Does operability criterion d in the Bases discussion of ITS LCO 3.7.8 mean that during normal two unit operation all containment cooler outlet automatic isolation valves are required to be shut?

Licensee Response:

3.7.8-8 not used

3.7.8-9 CTS 3.3.D.2.c

New isolation valves have been added to the previous single-isolation-valve nonessential load lines to ensure isolation if either Train A or B power is lost. The nonessential load lines to the Turbine Hall Deck do not close during an accident because they are isolated with only manual valves.

This comment is a placeholder for beyond-scope items 75 & 76. It remains open pending technical branch disposition. In addition to technical branch comments, respond to the following. License Amendment Request #206 is pending which covers the plant equipment changes noted above. LAR-206 will mostly likely be incorporated with issuance of the ITS conversion.

Also, unique plant specific differences for the SW System should be explained in-depth in the ITS Bases.

The licensee should reconfirm that all nonessential loads that are required to be isolated, in fact can now be isolated during loss of power events.

Do the safety analyses assume certain manually isolated nonessential loads are left open during accident conditions and is there extra SW flow capacity allocated? Do any of these features get any ITS surveillance? These features of the SW system have not been identified or discussed in the ITS Bases, so add appropriate discussion.

Licensee Response:

<u>STS 3.7.9, Ultimate Heat Sink (UHS)</u>

3.7.9-1 JFD 1

The CTS does not include specific requirements for the Ultimate Heat Sink (UHS). STS 3.7.9 LCO is not adopted by the ITS.

Comment: JFD 1 clearly states the safety analysis assumptions include an UHS water level of four feet under the normal lake level and a maximum temperature of 80°F. The purpose of an LCO is to assure the assumptions of the safety analyses are maintained by periodic monitoring of the plant operating conditions. Also, the last sentence of JFD 1 states when the UHS is out of tolerance the Service Water System is declared inoperable which requires both Units (not

one unit) to be placed in Mode 5. Therefore, it is consistent with the guidance provided in the STS to have an ITS LCO for the UHS. Revise the submittal to provide the necessary ITS LCO.

Licensee Response:

STS 3.7.10, Control Room Emergency Filtration System (CREFS) (ITS 3.7.9)

3.7.10-1 not used

3.7.10-2 Bases for ITS 3.7.9 Applicability

The CTS Applicability has been modified by the Bases for ITS 3.7.9, Applicability.
Comment: The Bases for ITS 3.7.9, Applicability show that JFD 1 justifies a deviation from the STS that is not contained in JFD 1. The deviation states that "This LCO does not apply to irradiated fuel assemblies placed in the Independent Spent Fuel Storage Installation." This exception does not appear to be contained in the CTS; and therefore, this a less-restrictive CTS change.

Comment: Provide the missing DOC and JFD that explain and justify the purpose for this deviation from the STS.

Licensee Response:

3.7.10-3 DOCs A7, L1
CTS 3.12.2.a, b and c,
CTS 4.11.1, and 4.11.4.a, b, c, d and e
ITS SR 3.7.9.2 and SR 3.7.9.6
ITS Section 5.5 DOCs LA6, L1, and L2
ITS Section 5.5 JFDs 2 and 8

CTS 3.12.2.a, b and c, 4.11.1, and 4.11.4.a, b, c, d and e contain specific operability and testing requirements for the HEPA filter and charcoal adsorber banks and fans. ITS SR 3.7.9.2 requires these CTS requirements be verified in accordance with a new Ventilation Filter Test Program (VFTP) specified in ITS 5.5.10. ITS SR 3.7.9.6 specifies fan testing.

(1) There is an inconsistency in the filter test intervals which are stated at six-month intervals in the FSAR 9.8.4, one year in the CTS and apparently 18 months in the new ITS VFTP. Sections 3.7.10 and 5.5.10 of the submittal contain no adequate justification for the Frequency relaxations of these CTS testing requirements.

Comment: Provide additional justification for the Frequency relaxation for each numbered CTS surveillance.

(2) DOC LA6 for ITS Section 5.5, Specification 5.5.10, is meant to justify relaxing the CREFS CTS testing requirements to the test provisions recommended in Regulatory Guide 1.52, Rev. 2, ASTM D3803-1989 and ASME N510-1989, as applicable. However, no specific discussion is given describing the relaxations.

Comment: Describe the relaxations for each test requirement and explain how RG 1.52, Rev. 2, applies to PBNP. This is a beyond-scope issue for SPLB review.

(3) The markup of CTS 4.11.4 in ITS submittal Section 5.5 shows that ASME N510-1989 and ASTM D3803-1989 will be referenced in corresponding requirements in ITS 5.5.10.a, b, c and d. The STS 5.5.11 markup and smooth version of ITS 5.5.10 only reference ANSI N510-1980, except that ITS 5.5.10.c does reference ASTM D3803-1989.

Comment: Correct this inconsistency.

Licensee Response:

3.7.10-4 DOC L5; JFD 4 and JFD 9
CTS 4.11.3
ITS SR 3.7.9.1

CTS 15.4.11.3 requires the CREFS to be operated for 10 hours each month. ITS SR 3.7.9.1 has not retained this same CTS requirement and has reduced CREFS operation to only 15 minutes each month.

Comment: DOC L.5 explains that the basis for the CTS 15.4.11.3 requirements has not been known for over 25 years and this verification has apparently been performed without knowing if it was correctly performed or not. Was the CREFS operated for 10 hours in operational mode 3 or 4? If the PBNP CREFS was not like the more recent standard, perhaps longer system operation was still meant to remove any accumulated moisture from the charcoal banks from humidity in the ambient air regardless of the location of heaters in the CREFS? Also, since there are heaters installed downstream from the recirculation fans, CREFS can be operated in mode 3 and this heated air is directed through the emergency fan filters and adsorber banks. A justification based upon not knowing the reason for a CREFS operation test is an insufficient reason for removing a CTS requirement and an invalid basis for making this less-restrictive CTS change. PBNP should establish a technical basis for the CTS requirement (with or without the help and review of the NRC technical branch) to re-evaluate retention of this CTS requirement.

Licensee Response:

3.7.10-5 DOC L1; JFD 7, and JFD 11
CTS 3.12.2.c and 4.11.4.e
ITS SR 3.7.9.6

CTS 3.12.2.c and 4.11.4.e specify that the CREFS emergency fans be tested once per year and the testing be conducted to show operation within 10 percent of the design flow. ITS SR 3.7.9.6 retains this requirement with some modification of the specific methods of conducting this operational test.

(1) The CTS markup differs from the STS markup and smooth version of ITS 3.7.9.

Comment: Correct the CTS markup to match the ITS and the Bases for ITS SR 3.7.9.6 which state that each emergency fan will be tested separately every 18 months.

(2) The ITS markup of the Bases for ITS SR 3.7.9.6 shows JFD 12 as justification for the removal of Staggered Test Basis instead of JFD 11.

Comment: Correct this error.

(3) CTS 4.11.4.e requires testing CREFS to within 10 percent of the system design "makeup" flow; ITS SR 3.7.9.6 requires testing at the makeup flow rate "of 10% of the system design." The CREFS system flow rate is 20,000 cfm.

Comment: Put in the actual plant specific makeup flow rates of 4950 cfm ± 10 percent.

Licensee Response:

3.7.10-6 DOC A8
CTS 4.11.4.e
ITS SR 3.0.2

CTS 4.11.4.e requires performance of fan testing following "maintenance or repair." This CTS requirement is retained as part of the general requirement of ITS 3.0.2. However, the CTS - ITS requirement correspondence given in DOC A8 incorrectly says this explicit post-maintenance test provision is deleted.

Comment: Correct the DOC. Note, the practice of using “deleted” in an A-type DOC to describe a specific requirement which is retained through a general requirement should be carefully handled when preparing the A-tables for the safety evaluation attachment. This comment is likely applicable in many places in the submittal.

Licensee Response:

3.7.10-7 not used

3.7.10-8 DOC M3 and JFD 6
No CTS Requirements
ITS SR 3.7.9.5

The CTS requirements have been modified by the addition of ITS SR 3.7.9.5 which requires verification of the CREFS manual start capability and alignment. This requirement has been placed here instead of being in located in the instrumentation section like STS 3.3.7.

This comment is a placeholder for beyond-scope item 78. It remains open pending technical branch disposition.

3.7.10-9 DOC L4 and JFD 5
CTS 4.11.2
ITS SR 3.7.9.4

CTS 4.11.2 requires CREFS automatic initiation be demonstrated once per year. ITS SR 3.7.9.3 and SR 3.7.9.4 have been added to retain the CTS requirement.

(1) It is acceptable to have the two ITS SRs, provided the CTS equivalence can be established. The "less-restrictive" Frequency of every 18 months is accepted. ITS SR 3.7.9.4 can be accepted if the phrase "...that is not locked, sealed or otherwise secured in position..." is removed from the SR. The JFD 5 justification is not accepted because locking closed various dampers reduces CREFS to a single mode 4 operating system. This would eliminate the smoke clearing function of CREFS. It would also eliminate operation in mode 3 with the heaters operating to remove moisture from the HEPA filters banks of the emergency fans. (See Comment 3.7.10-4.) This SR is performed at refueling intervals (Mode 6) which permit repairs as needed to get the CREFS fully operational. Contrary to JFD 5, all containment isolation valves locked closed during Modes 1, 2, 3 or 4 to permit continued operation must be restored Operable before returning to power. Therefore, the units must not be allowed to return to power when CREFS is inoperable. It appears that in JFD 5 the licensee is actually requesting a new Action which permits continued two unit power operation provided CREFS is operating continuously in the emergency mode of operation (mode 4).

(2) It appears that the HEPA filter located in the CREFS flow path just upstream of the recirculation fans is not tested in accordance with the VFTP requirements. The inoperability of this component which lies directly in the emergency mode single flow path is not explained or justified by a DOC or JFD. Provide additional technical justifications and explanations to respond to these issues.

Licensee Response:

<u>STS 3.7.11, Control Room Emergency Air Temperature Control System (CREATCS)</u>

3.7.11-1 JFD 1
No CTS Requirement
No ITS Requirement

The ITS has not adopted STS 3.7.11, Control Room Emergency Air Temperature Control System (CREATCS). JFD 1 states the STS was not adopted because the CTS does not contain any requirement for CREATCS, in spite of, the chillers HX-100 A&B which are located directly in the primary success path of the CREFS system (between the HEPA filter and the recirculation fans) that mitigates a transient or DBA. This chiller is supplied with component cooling water to operate in CREFS mode four (accident mitigation emergency mode) and it is

the primary component for controlling the temperature of the control room air besides the computer room supplementary air conditioning units that only operate in mode one. There is little temperature margin because if power is lost, the control room over heats within two hours when it begins to affect the temperature limits of safety-related equipment as required by Regulatory Guide 1.97.

Comment: Revise the submittal to adopt this STS 3.7.11 as appropriate for the PBNP design.

Licensee Response:

STS 3.7.12, Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS)

Because the operation of the auxiliary building ventilation system is not assumed in the mitigation of any PBNP DBA or transient, it is acceptable to not adopt the requirements of the STS 3.7.12 for this ventilation system. No comments.

STS 3.7.13, Fuel Building Air Cleanup System (FBACS)

Because the operation of the drumming station area ventilation system and the spent fuel pit ventilation system are not assumed in the mitigation of any PBNP DBA or transient, it is acceptable to not adopt the requirements of the STS 3.7.13 for these ventilation systems. No comments.

STS 3.7.14, Penetration Room Exhaust Air Cleanup System (PREACS)

Because the operation of the auxiliary building ventilation system and its associated charcoal filter subsystem are not assumed in the mitigation of any PBNP DBA or transient, it is acceptable to not adopt the requirements of the STS 3.7.14 for these ventilation systems.

STS 3.7.15, Fuel Storage Pool Water Level (ITS 3.7.10)

There are no comments for ITS 3.7.10.

<u>STS 3.7.16, Fuel Storage Pool Boron Concentration (ITS 3.7.11)</u>

3.7.16-1 DOC A4
No Bases for CTS
Bases for ITS 3.7.11

There are no Bases for CTS 15.5.4 which have been replaced entirely by the proposed Bases for ITS 3.7.11.

Comment: It is acceptable to add the proposed Bases for ITS 3.7.11; however, the DOC A.4 justifies this proposal based upon the contents of DOC M.3. DOC M.3 does not exist, so this DOC is incomplete. Revise this DOC or provide the missing technical justification.

Licensee Response:

3.7.16-2 DOC A5 and JFD 2
CTS 5.4.3
ITS 3.7.11 Applicability

CTS 5.4.3 requires a minimum boron concentration limit to be met "whenever there are spent fuel assemblies in the storage pool." ITS 3.7.11 Applicability retains the same requirement.

(1) As stated in DOC A5 and JFD 2, the STS has not been adopted because the proposed ITS Applicability "...encompasses movement of fuel assemblies in the spent fuel storage pool relative to inadvertent placement of a fuel assembly...." This would include the STS Applicability times when a fuel storage pool verification has not been performed since the last fuel movement. Unfortunately, these specific details from the DOC/JFD justifications and these current PBNP interpretations of the CTS Applicability are not included in the proposed Bases Insert 3.7.16-4 for ITS Applicability.

Comment: Revise the Bases to explain the basis and interpretations of the CTS Applicability or alternately adopt the STS.

(2) Per the text in DOC A5 and JFD 2, there appears to be a safety analysis of an inadvertent placement of a fuel assembly during an excessive cooldown event. Does this event result in a minimum temperature limit for the spent fuel pool which should be maintained by an LCO?

Comment: Revise the ITS Bases with an explanation of the basis for this event.

Licensee Response:

3.7.16-3 not used

3.7.16-4 DOC M1 and JFD 4
CTS 5.4
ITS 3.7.11 Actions

CTS 5.4 does not contain any Required Actions if the fuel storage pool boron concentration limit is not met. ITS 3.7.11 adds new Required Actions if the LCO is not met. In accordance with the STS, ITS 3.7.11 adds Required Actions which is acceptable; however, STS 3.7.16 Required Action A.2.2 must be adopted as modified by NRC approved TSTF-70, Revision 1. JFD 4 is accepted in that PBNP does not have regionalized storage racks and all storage locations have the same storage limits; however, JFD 4 states that STS 3.7.16 Required Action A.1 prevents <u>future</u> "inadvertent placement of a fuel assembly between the storage racks and the fuel pool wall." Unfortunately, it does not remediate <u>past</u> inadvertent placement of fuel assemblies since the last fuel storage verification. This is why STS 3.7.16 Required Action A.2.2 to "initiate action to perform a fuel storage verification" must be retained.

Comment: Adopt STS 3.7.16 Required Action A.2.2 and revise DOC M1 and the Bases for ITS 3.7.11 to discuss all the adopted STS Required Actions.

Licensee Response:

3.7.16-5 not used

STS 3.7.17, Spent Fuel Pool Storage (ITS 3.7.12)

3.7.17-1 DOC A.4 and JFD 2
CTS 15.5.4.2
ITS 3.7.12 LCO and ITS SR 3.7.12.1

CTS 15.5.4.2 specifies the fuel assembly placement requirements for storage in the spent fuel pool. ITS 3.7.12 LCO states the fuel assembly storage limits must be met and ITS SR 3.7.12.1 contains the list of storage requirements.

(1) DOC A.4 is justified as providing changes that are consistent with the format and presentation of the STS; however, this is not the case. The Condition A is "When the LCO is not met" but there is no listing of the criteria to be met contained in the LCO statement or in the Bases for the LCO which defines how the LCO is Operable or is met. Rather than placement in ITS SR 3.7.12.1, the list of requirements that constitute the fuel storage limits which mitigate accident consequences should be in the LCO, and the SR should be changed as follows:

LCO 3.7.12 Each fuel assembly stored in the spent fuel pool shall be within limits when:
1. It is upright and seated properly in the spent fuel storage rack; and
2. It meets one of the following criteria:
   a. The enrichment of the fuel assembly is $\leq$ 4.6 percent w/o U-235; or
   b. The fuel assembly contains Integral Fuel Burnable Absorber (IFBA) rods in accordance with Figure 3.7.12-1; or
   c. The fuel assembly is in accordance with Specification 4.3.1.1.

SR 3.7.12.1 "Verify by administrative means each fuel assembly meets the fuel storage limits" at a Frequency of "Prior to storing fuel in the spent fuel storage pool."

The complete list of fuel storage requirements consisting of (1) requirements which mitigate accident consequences; (2) requirements which do not mitigate accident consequences; (3) administrative storage requirements; and, (4) requirements that are fulfilled by Specification 4.3.1.1 must be stated in the ITS Bases.

(2) JFD 2 is used to justify the plant specific changes to the ITS Bases; however, three of the deviations from the STS are not justified and appear applicable to PBNP.

(a) The last sentence of the second paragraph of the Bases Background is not adopted which ensures ITS 3.7.11 LCO will be met before fuel is moved.

(b) The third and fourth sentences of the Bases for Applicable Safety Analyses are not adopted, which imply checking the location of each fuel assembly is not important.

(c) The last sentence of the Bases for LCO is not adopted which provides alternate criteria for storage of fuel assemblies which do not fit any of the fuel storage limits.

Provide explicit explanation for these deviations from the STS or adopt the STS text.

(3) The title from CTS Figure 15.5.4-1, "Fuel Assembly IFBA Requirements" must be retained for ITS Figure 3.7.12-1 because this figure only pertains to IFBA requirements and not to all "Fuel Assembly Storage Limits," as implied.

Revise the DOC, CTS markup, JFD, ITS markup and ITS Bases accordingly to respond to the above issues.

Licensee Response:

3.7.17-2 DOC LA.1
CTS 15.5.4.4
No ITS 3.7.12 requirement

CTS 15.5.4.4 specifies fuel assembly placement requirements for storage in the spent fuel pool if the fuel assemblies have been critical for less than one year. These requirements are proposed to be moved from ITS 3.7.12 to the PBNP FSAR.

It is appropriate that all criteria applicable to the movement and placement of fuel assemblies (CTS 15.5.4.2, CTS 15.5.4.4, and also see Comment 3.7.17-5) be moved to the Bases of ITS 3.7.12 for the operator or TS Users reference, in addition to being located in the FSAR. Revise the ITS Bases.

Licensee Response:

3.7.17-3 DOC M.1 and JFD 2
CTS 15.5.4.2
No ITS 3.7.12 requirement

CTS 15.5.4.2 specifies the fuel assembly placement requirements for storage in the spent fuel pool but there is no Required Action if the fuel assemblies are incorrectly located. ITS 3.7.12 adds new Required Actions.

(1) It is acceptable to add Required Actions based upon the STS; however, DOC M.1 and JFD 2 both contain justifications for changes to the STS which imply that Completion of the ITS Required Action A.1 is not necessary. This conclusion is apparently because the analysis is based upon unborated water in which all accidents are fully mitigated and with borated water controls in place any potentially mislocated fuel assembly accident is kept far above the safety limit. These justifications are not acceptable and the Required Action does not provide explicit action to the Operator for this LCO which controls only the movement and placement of the fuel assemblies. The STS Required Action A.1 should read "Initiate action to move the noncomplying fuel assembly."

(2) The repetitive phrase used in at least four places is that "...under normal conditions there exists...no immediate criticality concerns <u>exits</u> (sic) for the range of fuel concentration...." This is an apparent typo, instead of "exists" that should be corrected when the submittal is revised for Issue #1.

(3) Bases Insert 3.7.17-3 acknowledges that acceptable corrective actions should be the movement of fuel to a new location which appears to be the only Required Action when this LCO is not met. Therefore, this is another reason STS Required Action A.1 should be retained. Also, the DOC should be revised to include this Bases example.

Revise the DOC, CTS markup, JFD, ITS markup and ITS Bases accordingly to respond to the above issues.

Licensee Response:

3.7.17-4 DOC M.2
CTS 15.5.4.2
ITS SR 3.7.12.1

The September 4, 1997, version of CTS 15.5.4.2 specifies a fuel assembly meets the requirements for storage in the spent fuel pool if its has a reference infinite multiplication factor, K_∞, less than or equal to 1.49364, which includes a 1 percent ΔK reactivity bias. This CTS requirement is omitted ITS 3.7.12.

(1) DOC M.2 does not discuss how the ITS implementation will treat all the stored fuel assemblies that meet this old CTS requirement, but that will not meet the new ITS requirements of ITS SR 3.7.12.1. Provide a technical discussion on how this issue will be resolved.

(2) The February 8, 2000, version of CTS 15.5.4.2 does not contain this criterion, as indicated by the CTS markup for ITS Section 4.0, Design Features. Resubmit the CTS markup of this page for ITS 3.7.12.

Licensee Response:

3.7.17-5 DOC 4.0 LA3
CTS 15.5.4.2
No ITS 3.7.12 requirement

CTS 15.5.4.2 specifies "An inspection area shall allow rotation of fuel assemblies for visual inspection but shall not be used for storage." Based upon the contents of Section 3.7 only, it appears that these requirements are proposed to be moved ITS 4.0. DOC LA3 of that section states these words are moved to the FSAR. It is more appropriate that all criteria applicable to the movement and placement of fuel assemblies (see CTS 15.5.4.2, CTS 15.5.4.4, and Comment 3.7.17-2) be moved to the Bases of ITS 3.7.12 for the operator or TS Users reference.

Comment: Revise the ITS 3.7.12 Bases as suggested and provide a new DOC "LA" to justify the movement of this CTS requirement to the ITS 3.7.12 Bases.

Licensee Response:

3.7.17-6 not used

<u>3.7.18, Secondary Specific Activity (ITS 3.7.13)</u>

3.7.18-1 not used

3.7.18-2 DOC L.3
CTS 15.3.1.D.8 and CTS Table 15.4.1-2, item 8
ITS SR 3.7.13.1

CTS 15.3.1.D.8 requires that the secondary coolant gross radioactivity be monitored continuously by an air ejector gas monitor. Secondary coolant gross radioactivity shall be measured weekly or daily when the air ejector gas monitor is inoperable. ITS 3.7.13 does not retain these CTS requirements for the air ejector gas monitor.

(1) As DOC L.3 is presented, there is no difference between DOC L.2 and DOC L.3. The wording is exactly the same. This is an apparent error, if not, then provide an explanation.

(2) This CTS requirement has apparently been deleted without any DOC technical justification provided to account for what effect this will have upon the safe operation of PBNP. PBNP should retain this CTS requirement in ITS 3.7.12, verify its location elsewhere or justify if it can be retained by its movement outside TS. See comment 3.7.18-3 which assumes there is other ongoing monitoring of secondary coolant radioactivity (such as CTS 15.3.1.D.8), in addition to the specific periodic surveillances required by the ITS. Provide this missing technical justification.

Licensee Response:

3.7.18-3 DOC LA.1
CTS Table 15.4.1-2, item 8
ITS SR 3.7.13.1

CTS Table 15.4.1-2, item 8 requires that a secondary coolant system gross activity check is made weekly and an iodine concentration analysis is made weekly when the gross activity is exceeds 1.0 micro-curies per gram. ITS SR 3.7.13.1 does not retain the same Frequency for this verification which is proposed to be 31 days and the surveillance methods are moved to the BASES and to licensee-controlled procedures.

(1) DOC LA.1 does not mention the Frequency of these CTS surveillances which are proposed to be controlled in the licensee procedures. It is expected that these Frequencies will be retained as defined in the CTS. The assumed STS basis for accepting a relaxation of the ITS SR 3.7.13.1 Frequency is that there are non-TS licensee-controlled procedures for operation of continuous monitors and the same frequency of verifications for gross secondary coolant radioactivity in addition to the specific periodic ITS surveillance.
(See Comment 3.7.18-2). Provide additional technical explanation or assurance that these requirements are moved to licensee procedures without change. If these CTS requirements are to be changed as proposed, then this DOC must be submitted as an "L"DOC rather than as an "LA" DOC.

(2) The technical justification states that licensee-controlled documents will be subject to controls imposed by plant administrative procedures, but unfortunately does not state assurance that any future change made will be further subject to the regulatory control requirements such as 10 CFR 50.59. Retain these CTS requirements or provide the missing technical justification as identified in the issues noted above.

Licensee Response:

3.7.18-4 DOC M.1 and JFD 3
Bases for CTS 15.3.4
Bases for ITS 3.7.13, Applicable Safety Analyses

The Bases for CTS 15.3.4 (on page 15.3.4-3) for determination of the maximum allowable coolant activity are based upon the safety evaluation provided with Amendment Nos. 173 and 177, dated July 1, 1997. Bases for ITS 3.7.13, Applicable Safety Analyses contain results using analytical methods and assumptions dated July 1981 that are based upon the SRP 15.1.5.

Comment: DOC M.1 and JFD 3 are confusing because the current licensing basis is proposed to be changed from a methodology granted in a recent TS amendment and superseded by a 19 year old analysis that is apparently more restrictive. If it is more restrictive, then why is the maximum allowable secondary coolant activity limit not reduced? Should the limit have been changed in the recent TS amendment and does this change correct an error? Please provide a further explanation.

Licensee Response:

3.7.18-5 JFD 3, 4, 5, 6
Bases for CTS
Bases for ITS 3.7.13

The CTS Bases have been totally replaced by the ITS proposed Bases. The following issues are identified which are related to Comment 3.7.18-4.

(1) The first sentence of the third paragraph of the Bases Background is applicable and should be adopted with the RCS limit stated. Insert B 3.7.18-2 states the RCS limit in two locations and the values are different. Correct errors or explain this difference.

(2) JFD 4 does not adopt the fourth paragraph of the Bases Background but there is no equivalent text inserted which replicates the results from either the July 1981 or July 1997 analyses reported in JFD 3. Provide explanations.

(3) The fifth paragraph of the Bases Background is adopted which contradicts the justification provided in JFD 4; otherwise, how is it determined that the 2-hour EAB dose is a small fraction of the 10 CFR 100 limit? Is the "limit" a <u>small fraction of the 10 CFR 100 limit</u> or is it the "limit" <u>established as the NRC-approved licensing basis?</u> Correct these errors or provide an explanation.

(4) JFD 5 is based upon the assumption that an operator suddenly finds the DOSE EQUIVALENT I-131 limit exceeded which is not realistic given other plant monitoring that is available and must be in place (See Comment Record Items 3.7.18-2 and 3.7.18-3). Regardless, STS 3.0.2 provides permission at any time to resume normal operations if the TS limit is restored during the period allowed for the plant shutdown. Adopt the STS text as is. Alternately, PBNP may obtain from the WOG a generic TSTF which is approved by the NRC for this deviation from the STS.

(5) Bases Insert B 3.7.18-4 states "...if the gross activity exceeds the 1.0 micro curie per gram limit, an isotopic analysis should be performed to determine DOSE EQUIVALENT I-131...." To be consistent with JFD 6, the word "should" must be replaced with "shall" or "are required."

Licensee Response:

RELOCATED LCOs

3.7.R-1 CTS 15.4.12 and CTS 15.4.13
Unknown Location of CTS Relocated Specifications
No "LA" DOCs or "R" DOCs

CTS 15.4.12 and CTS 15.4.13 specify requirements for sealed radioactive sources and snubbers. These requirements are not retained in the ITS.

Comment: The conversion to the ITS presumes the relocation of some CTS requirements outside of the ITS. CTS 15.4.12 and CTS 15.4.13 have generally represented TS requirements normally associated with Plant System requirements. There are no "LA" DOC or "R" DOC technical justifications provided in Section 3.7 to evaluate whether or not these requirements can be relocated. The location to where these CTS requirements are moved is unknown. The change control procedures for the location to which these CTS requirements are moved are not stated. Revise the DOCs, CTS markup, provide JFDs, ITS markups and ITS Bases markups, as necessary to respond to these comments.

Licensee Response: