

February 9, 2000

Mr. James Knubel
Chief Nuclear Officer
Power Authority of the State of
New York
123 Main Street
White Plains, NY 10601

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT: REQUEST FOR
ADDITIONAL INFORMATION REGARDING SECTION'S 2.0, 4.0, 3.0, 3.1, 3.2,
3.3, 3.5, 3.7, AND 3.10, OF THE IMPROVED TECHNICAL SPECIFICATIONS
(TAC NO. MA5049)

Dear Mr. Knubel:

The NRC staff is reviewing your application for license amendment dated March 31, 1999, as supplemented by letters dated May 20, June 1, July 14, and October 14, 1999, to change the format and content of the Current Technical Specifications (TSs) for the James A. FitzPatrick Nuclear Power Plant (FitzPatrick) to be generally consistent with NUREG-1433, Revision 1, "Standard Technical Specifications for General Electric Plants, BWR/4, Revision I, dated April 1995, and extend surveillance requirements from 18 months to 24 months.

On the basis of our review of the changes proposed for Improved TS (ITS) Sections 2.0, 3.0, 4.0, 3.1, 3.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.5, 3.7, and 3.10, we find that additional information identified in the enclosure is needed.

We have discussed this with your staff and it was agreeable to your staff to respond to this request for additional information and comments within 60 days from receipt of this letter.

If you have questions regarding this letter or are unable to meet this response schedule, please contact me by phone on (301) 415-1441 or by electronic mail at gsv@nrc.gov.

Sincerely,

/RA/

Guy S. Vissing, Sr. Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosure: Request for Additional Information

cc w/encl: See next page

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On the basis of our review of the changes proposed for Improved TS (ITS) Sections 2.0, 3.0, 4.0, 3.1, 3.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.5, 3.7, and 3.10, we find that additional information identified in the enclosure is needed.

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cc w/encl: See next page

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**REQUEST FOR ADDITIONAL INFORMATION AND COMMENTS
REGARDING THE STAFF REVIEW OF THE FITZPATRICK
PROPOSED IMPROVED TECHNICAL SPECIFICATIONS**

SECTION 2.0 SAFETY LIMITS (SL)

RAI 2.0-1

ITS SL 2.1.1.2, MCPR SL Note and associated Bases
CTS SL 1.1.A Note
JFD CLB1

The ITS retains the CTS Safety Limit note that the MCPR SL is applicable for cycle 14 only. This note is not in the STS.

Comment: The MCPR SL note is not necessary. The treatment of the cycle specific MCPR SL is being addressed in the STS by proposed change TSTF-357.

Licensee Response:

SECTION 3.1 - REACTIVITY CONTROL SYSTEMS

RAI 3.1-1

ITS 3.1.2 Reactivity Anomalies
ITS LCO, SR 3.1.2.1, and Bases
CTS 3/4.3.D
DOCs LA1 and M3
JFD PA1

The STS term "monitored rod density" is replaced with the ITS term "measured rod density."

Comment: CTS 4.3.D refers to "reactivity monitoring" during power operation, similar to the STS use of the term "monitoring." The Bases states that the "3D Monicore System calculates the rod density for the reactor conditions." Isn't this more "monitoring" than "measuring?" Why has the term been changed? The change in terminology has not been explicitly addressed.

Licensee Response:

RAI 3.1-2

ITS 3.1.2 Bases
JFD PA2

Throughout the Bases the STS term "Anticipated Operational Occurrence" has been replaced in the ITS with "Anticipated Operational Transient."

Comment: Has "Anticipated Operational Transient" been defined/utilized in the UFSAR, rather than "Anticipated Operational Occurrence?"

Enclosure

Licensee Response:

RAI 3.1-3

ITS 3.1.3 Required Action A.3

SR 3.1.3.2 and SR 3.1.3.3

JFD PA1

SR 3.1.3.2 and SR 3.1.3.3 are defined by “fully withdrawn control rods” and “partially withdrawn control rods” in ITS 3.1.3 Required Action A.3, for clarity.

Comment: This will be the only place where the distinction between partially and fully withdrawn control rods is made in the ITS. The type of control rods that apply is self-evident. It is not certain that the addition adds clarity.

Licensee Response:

RAI 3.1-4

Bases ITS 3.1.3 Actions, pg B 3.1-16

JFD PA4

‘For clarity,’ “MODE 4” is replaced with “cold shutdown condition,” and “MODE 3” is replaced with “hot subcritical.”

Comment: Replacing the precisely defined terms with the imprecise phrases does not add clarity.

Licensee Response:

RAI 3.1-5

ITS 3.1.5 Required Action C.1

JFD PA2

ITS 3.1.5 Required Action C.1 is reworded for clarity.

Comment: Uncertain of enhancement; it is more concise but not as precise. Submit TSTF change proposal.

Licensee Response:

RAI 3.1-6

Bases ITS 3.1.6 Actions A.1 and A.2, pg B 3.1-36
JFD PA3

The sentence in the first paragraph clarifying the type of control rod movement that is acceptable when the control rod pattern is not in compliance with the BPWS has been deleted. The reason given for the deletion is that "... the Actions do not require that all control rod movement be stopped ...".

Comment: In fact the Action do not require that all control rod movement be stopped. The Action A.1 states, "Move associated control rod(s) to correct position." The Bases statement that is deleted supports the Required Action and should be retained.

Licensee Response:

RAI 3.1-7

Bases ITS 3.1.6 Actions A.1 and A.2, pg B 3.1-36
JFD PA4

The sentence in the second paragraph discussing control rod operability has been deleted. The reason given for the deletion is that it is not in the correct location.

Comment: Consider moving the sentence to the LCO Bases section where it would be more appropriate.

Licensee Response:

RAI 3.1-8

ITS SR 3.1.7.8 Frequency
CTS 4.4.A.5
M5, CLB2

The SR frequency change involves going from "24 months" in the CTS to "24 months on a staggered test basis" in the ITS. The change is classified as more restrictive since it "adds a more prescriptive requirement."

Comment: The change is mis-categorized since it in reality decreases the frequency each subsystem is now tested has gone from 24 to 48 months. This change needs to be justified, based on system reliability. Provide justification for change.

Licensee Response:

RAI 3.1-9

ITS 3.1.8 Required Action A.1
JFD X.2

The ITS adopts an action, for one or more SDV vent or drain lines with one valve inoperable, to isolate the associated line within 7 days. The STS requires restoring the valve to operable status within 7 days.

Comment: WNP2 had this approved in their conversion with the understanding that they would submit a TSTF change proposal to modify the STS. What is the status of that TSTF change?

Licensee Response:

RAI 3.1-10

Bases ITS 3.1.8 Applicability, pg B 3.1-48
JFD PA1

A sentence has been removed from the Applicability section of the Bases related to control rod withdrawal in Modes 3 and 4.

Comment: Why has the sentence been removed?

Licensee Response:

SECTION 3.2 - POWER DISTRIBUTION LIMITS

RAI 3.2-1

ITS 3.2.4.2 LCO and ITS SR 3.2.4.2
JFD PA1, DOC A3

The ITS replaces the STS setpoint requirements with allowable value requirements.

Comment: It is the setpoints that are adjusted, not the allowable values; the allowable values remain constant. Discuss change.

Licensee Response:

SECTION 3.3 - Instrumentation

3.3.1.1 - Reactor Protection System (RPS) Instrumentation

RAI ITS 3.3.1.1-1

ITS Table 3.3.1.1
DOC A19

CTS 2.1 lists 8 RPS Trip Functions as “limiting safety system trip settings.” The proposed RPS ITS Table 3.3.1.1-1 renames these “allowable values”. The staff interprets that the “Allowable Values” listed in ITS Table 3.3.1.1-1 as the “limiting safety system settings” required by 10 CFR 50.36 and they are values derived from an approved setpoint methodology which includes instrument channel uncertainties associated with the measured parameter and the installed instrumentation.

Comment: DOC A19 indicates that the CTS values are treated consistent with the ITS values when determining Function or channel operability, therefore, it appears that the change represents an Administrative Change. However, a more complete explanation of the defined terminology is required for Table 3.3.1.1-1 Functions 3, 6, 7.a and 7.b allowable values taken from CTS Table 3.1-1 to clarify that the CTS “trip level settings” and the ITS “Allowable Values” are both the TS limit values placed on the “as-found” trip actuation setpoint that includes all applicable instrument channel and measurement uncertainties.

Licensee Response:

RAI 3.3.1.1- 2

DOC L.4

CTS Table 3.1-1 requirements for APRM Neutron Flux -Startup during Refuel (Note 7), APRM Inoperative during Refuel (Note 7), and CTS 2.1.A.1.b requirements for APRM Neutron Flux Scram Trip Setting during refuel are deleted in the ITS. DOC L.4 justifies this deletion based on the staff findings contained in the safety evaluation report for Amendments 41 and 7 to the Limerick Plant Unit 1 and Unit 2 respectively. These amendments eliminated APRM RPS trip operability requirements in Mode 5 for all cases other than during SDM demonstrations. The SDM requirement is moved to ITS 3.10.8.

Comment: Proposed license amendments unrelated to topical reports require plant-specific safety analyses and staff evaluation without relying on references to other plant approved amendments or other staff issued safety evaluations as supporting justification. Remove the citation to the Limerick amendments and provide plant specific data to support proposed CTS changes.

Licensee Response:

RAI 3.3.1.1-3

DOC - none

The CTS 2.1.b trip setting for the APRM Flux Scram is γ 15% of rated neutron flux. The proposed ITS Table 3.3.1.1-1 Allowable Value for the APRM - High (Startup) is “ γ 15% RTP”.

Comment: Provide documentation which justifies that the CTS trip setting units, “rated neutron flux” units are equivalent to the ITS Allowable Value “RTP” units.

Licensee Response:

RAI 3.3.1.1-4

DOC - none

The CTS 2.1.b trip setting Applicability for the APRM Flux Scram includes the Hot Standby Mode. However Hot Standby Applicability is not included in CTS Table 3.1-1, or in the ITS.

Comment: Provide discussion of the CTS discrepancy and omission of the Hot Standby Applicability in the ITS.

Licensee Response:

Beyond Scope Issue (BSI) - change to CTS allowable value

RAI 3.3.1.1-5 (BSI)

DOC L.9

CTS 2.1.5, “Main Steam Line Isolation Valve Closure Scram Trip Setting” is γ 10% valve closure from full open. The proposed ITS Table 3.3.1.1-1 Function 5, “Main Steam Line Isolation Valve - Closure” Allowable Value is γ 14% closed.

Comment: DOC L9 provides discussion and justification for the change based on the current setpoint methodology, established consistent with ISA-67.04-1994. The trip setting value change is outside the RTSB scope of review. Additionally, L9 is shown on CTS markup page 14 of 15 to be the DOC for the addition of SR 3.3.1.1.6 to ITS function 2.a. DOC L9 does not include such a discussion of change. Clarify the CTS markup. Licensee to provide applicable change request and schedule to the PM.

Licensee Response:

RAI 3.3.1.1-6

DOC - none

CTS 4.1.A, footnote “*” omits the sensor from Response Time Testing of the RPS actuation logic circuits for Function 1, Reactor High Pressure and Function 3, Reactor Water Level - Low (L3). ITS SR 3.3.1.1.16, Note 2 also omits these sensors from Response Time Testing, maintaining the current licensing basis.

Comment: Staff approval of topical report NEDO-32291 included specific language for replacing testing with design sensor response time. Revise ITS SR 3.3.1.1.16, Note 2 to read as follows: “For Functions 3 and 4, the sensor response time may be assumed to be the design sensor response time.”

Licensee Response:

RAI 3.3.1.1-7

CLB-11

CTS Table 3.1-1, Note 3.B Action requires reducing power to the IRM range and placing the Mode Switch in the Startup Position within 8 hours. ITS 3.3.1.1, Action F, adopts the CTS time allowance to be in Startup which is 2 hours longer than the 6-hour time in the STS. As proposed the ITS actions do not require reducing the power to the IRM range.

Comment: This proposed change represents a less restrictive requirement which is not justified in CLB 11. Provide technical discussion and justification for deleting the CTS requirement to reduce power to the IRM range.

Licensee Response:

RAI 3.3.1.1-8

CLB-2

STS SR 3.3.1.1.3 requires a Surveillance Test to verify the instrument channel conforms to a calibrated flow signal, every 7 days. CLB-2 states that the CTS Channel functional test includes this verification on a 92 day interval, therefore credit for the test is included in ITS SR 3.3.1.1.8, Channel functional test. It is not clear that this type of testing is required to be included as part of the ITS definition of Channel functional test, nor why the 92 day Frequency does not affect safe operation of the plant.

Comment: Provide additional discussion and justification for the STS deviation, including a clear description of the CTS test method. Provide a safety basis discussion for the 92 day surveillance test interval.

Licensee Response:

RAI 3.3.1.1-9

DOC L13

CTS Table 4.1-2 requires a once per 24 hour Heat Balance (Calibration) of the APRM High Flux Output Signal. The corresponding ITS (SR 3.3.1.1.2) proposes to extend the surveillance frequency to 7 days consistent with STS. However, DOC L13 for the justification of a 7 day surveillance frequency does not state that it is JAFNPP operating experience which shows that historically only minor changes in LPRM sensitivity have occurred between APRM heat balance calibrations.

Comment: Show that data from operating experience at JAFNPP supports the chosen 7 day surveillance frequency.

Licensee Response:

RAI 3.3.1.1-10

DOC A12

CTS Table 4.1-1 Note 4 specifies that Turbine First Stage Pressure instrumentation is exempted from the "instrumentation channel test" definition. DOC A12 justifies the change based on CTS and ITS definitions. The CTS markup shows that this function is translated into ITS Table 3.3.1.1-1 Function 8 (Turbine Stop Valve Closure) and Function 9 (Turbine Control Valve Fast Closure). Both of these functions include channel functional testing as part of the required surveillance tests.

Comment: CTS do not include an "instrument channel test" definition. Provide additional discussion explaining the change justified by DOC A12.

Licensee Response:

RAI 3.3.1.1-11

DOC M12

DOC M12 provides discussion that CTS Stop Valve and MSIV Closure limit switch testing is once per 24 months and that the ITS specifies the same interval. It appears M12 discusses Administrative changes.

Comment: Revise DOC M12 to include discussion of the more restrictive requirements that result from adding ITS SR 3.3.1.1.15.

Licensee Response:

RAI 3.3.1.1-12

JFD DB3 (insert page B 3.3-8, insert page B 3.3-9)

Insert Function 2.b-1 (DB3) Bases provided on these pages for the APRM Neutron Flux - High (flow biased) addresses the safety analysis basis for the RPS Function. Insert page B 3.3-8 states that this Function is not (emphasis added) specifically credited in the safety analysis, whereas insert B 3.3-9 states that the Allowable Value of this Function is credited in the safety analysis and specifically confirmed for each operating cycle.

Comment: Clarify the need for both statements in proposed ITS Bases.

Licensee Response:

RAI 3.3.1.1.-13

DB7 (STS page B 3.3-12)

Bases insert DB7 states that the Reactor Pressure-High trip is credited for generator load reject and main turbine trip events when initiated from low power levels (Reactor Pressure High is required to be operable in Modes 1 and 2). DB7 further states that at low power levels, e.g., less than 29% RTP, the Turbine Stop Valve Closure Function and the Turbine Control Valve Fast Closure Functions are not required to be operable.

Comment: The Bases added in DB7 infer that the modes of applicability for the Reactor Pressure High function (Modes 1 and 2) are not in agreement with TSV Closure and TCV Fast Closure specified applicability (≥29% RTP). Explain the Bases clarification provided by insert DB7.

Licensee Response:

3.3.1.2 - SRM Instrumentation

RAI 3.3.1.2-1

3.3.1.2-1

No associated JFD or DOC

ITS propose to adopt SR 3.3.1.2.4.a, but not SR 3.3.1.2.4.b. This change to the ISTS is not evaluated.

Comment: Provide missing DOC and JFD.

Licensee Response:

RAI 3.3.1.2-2

DOC L.1

ITS include required actions and associated completion times for one or more inoperable SRMs in Mode 2 with the IRMs on Range 2 or below.

Comment: Revise DOC L1 to include a safety basis discussion for adopting proposed ITS Required Actions A.1 and B.1 for specified plant conditions.

Licensee Response:

SECTION 3.3.2.1 - Control Rod Block Instrumentation

RAI 3.3.2.1-1

DOC L.7

Beyond Scope Issue (BSI) - change to CTS applicability

SR 3.3.2.1.4 is added to CTS Table 4.2.3 to verify that the RBM is not bypassed at Thermal Power >30% RTP and when a peripheral control rod is not selected every 92 days. Changing the CTS applicability by requiring the upscale RBM to be operable only above 30% RTP if a peripheral control rod is not selected is also a change to NUREG-1433, Table 3.3.2.1-1.

Comment: The Licensee and the Fitzpatrick Project Manager will address the proposed CTS change in a separate SE for this BSI.

Licensee Response:

RAI 3.3.2.1-2

DOC M.1

SR 3.3.2.1.1

SR 3.3.2.1.1 is added to CTS Table 4.2.3 to verify that the RBM-inop Function is verified operable on a 92 day frequency.

Comment: Revise DOC M1 to justify the addition of the proposed SR, including the proposed SR frequency.

Licensee Response:

RAI 3.3.2.1-3

CTS 4.3.B.3.a.4

DOC L.4, M.5

CTS 4.3.B.3.a.4 requires demonstration of the rod block function of the rod worth minimizer during startup, prior to the start of control rod withdrawal. The corresponding ITS SR 3.3.2.1.2 requires a channel functional test of the RWM every 92 days in Mode 2 and a Note to SR 3.3.2.1.2 delays the performance of the surveillance until 1 hour after any control rod is withdrawn at greater than or equal to 10% RTP. In addition, ITS SR 3.3.2.1.3 is added (see M5) to perform a channel functional test in Mode 1, but not until 1 hour after thermal power is greater than or equal to 10% RTP. These changes, consistent with the STS, are justified in DOC L.3 and JFD DB2, based on reliability analysis results documented in NEDC-30851-P-A.

Comment: The extended SR Frequency based on topical report NEDC-30851-P-A requires prior review and approval by the staff for use in ITS. Provide a license amendment citation for the referenced analysis.

Licensee Response:

RAI 3.3.2.1-4

CTS 3.3.B.3.d

DOC LA.4

The LA.4 DOC justifies relocating CTS reporting requirements to the ITS Bases for any plant startup made without the RWM operable. It is not appropriate to include requirements, including specifying required reports, in the Bases that change TS requirements.

Comment: Either propose to retain the reporting requirements in LCO 3.3.2.1 or propose an L-DOC to justify deleting the CTS requirement.

Licensee Response:

RAI 3.3.2.1-5

CTS 4.2.C (Table 4.2-3)

DOC L2

DOC L2 states that performing an instrument check is impractical and that setpoint renulling occurs automatically for the RBM functions without stating regulatory reasons for deleting these CTS testing requirements.

Comment: Provide additional explanation giving a safety basis for not requiring an Instrument Channel Check of the RBM Upscale and Downscale Functions once per day.

Licensee Response:

RAI 3.3.2.1-6

CTS 4.3.B.5

DOC L6

CTS specify requirements to perform an RBM functional test prior to withdrawal of designated rod(s) when a limiting control rod pattern exists. L6 justifies deleting testing requirements because performing a functional test due to one channel being inoperable does not increase the reliability of the other channel.

Comment: Explain the nexus between DOC L6 and CTS testing requirements proposed to be deleted.

Licensee Response:

Section 3.3.2.2 - Feedwater and Main Turbine High Water Level Trip Instrumentation

RAI 3.3.2.2-1

CTS Table 3.2-6

DOC A6

CTS Table 3.2-6 lists the "Trip Level Setting" for Reactor Vessel Water Level - High as 222.5 inches. The corresponding ITS SR 3.3.2.2.3 lists the "Allowable Value" for this setting at 222.5 inches. It is not clear that the CTS "Trip Level Setting" is equal to the ITS "Allowable Value." It is assumed that the CTS value is the actual device actuation setpoint and the ITS Allowable Value is the limit on the actuation setpoint which includes all instrument channel uncertainty, as defined in ITS 1.0.

Comment: Provide additional discussion and justification for the change including verification that the ITS value does not result in a change to the actual CTS limit.

Licensee Response:

RAI 3.3.2.2-2

CTS Table 42-6, Note 2

DOC A4

Note 2 discusses the CTS requirement to inject a simulated signal into the measurement channel as close to the sensor as practicable to satisfy the requirements of the instrument channel functional test. DOC A4 addresses deleting this portion of the Table notation. Note 2 also includes a statement that the instrumentation is exempt from the instrument channel functional test definition. This statement is also deleted but DOC A4 does not evaluate the change.

Comment: Provide additional discussion for proposed changes.

Licensee Response:

Section 3.3.3.1 - Post Accident Monitoring Instrumentation

RAI 3.3.3.1-1

CTS Table 3.2-6, Note K
DOC LA3

CTS Table 3.2-6, Note K specifies that the primary containment atmosphere shall be continuously monitored for hydrogen and oxygen (H₂/O₂) when in the Run and Startup/Hot Standby modes; except, when the Post-Accident Sampling System (PASS) is to be operated, the containment atmosphere monitoring system (CAMS) may be isolated for a period not to exceed 3 hours in a 24-hour period. CTS require 1 of 2 containment atmosphere H₂/O₂ monitoring channels to be operable. The proposed ITS relocate the specific operational allowance to periodically isolate the monitoring system during PASS operation to the Bases. The proposed Bases states that the hydrogen/oxygen monitor is still considered operable during the realignment.

Comment: The staff notes that the Bases cannot be used to change TS LCO operability requirements. Thus, if CAMS is isolated to operate PASS and the CAMS cannot perform its intended function and the staff has not credited PASS to replace CAMS then the CAMS H₂/O₂ channel(s) are inoperable and the TS Actions should be entered. The CTS requirements added to the ITS Bases as part of LA3 should be restructured to be included in the LCO or otherwise dispositioned with an L-DOC.

Licensee Response:

RAI 3.3.3.1-2

CTS Table 3.2-6, Note K
DOC L5

CTS Table 3.2-6, Note K specifies that the primary containment atmosphere shall be continuously monitored for hydrogen and oxygen (H₂ /O₂) when in the Run and Startup/Hot Standby modes; except when the Post-Accident Sampling System (PASS) is to be operated, the containment atmosphere monitoring system (CAMS) may be isolated for a period not to exceed 3 hours in a 24-hour period. CTS require 1 of 2 containment atmosphere H₂/O₂ monitoring channels to be operable. The proposed ITS delete the maximum acceptable time period for operating with the CAMS isolated.

Comment: The staff notes that CTS Table 3.2-6, Note K states that when the PASS is in operation the CAMS may be isolated. Thus, Note K indicates that the design of PASS will render both CAMS inoperable when PASS is placed into operation. If so, the L5 justification for

deleting time limits for operating PASS based on a second channel of CAMS that is required to be operable should be reevaluated. Clarify DOC L5.

Licensee Response:

RAI 3.3.3.1-3

ITS Actions Notes

X1

The proposed Actions Note 2 requests separate condition entry for PCIV position indication.

Comment: Show that the TS and Bases changes are consistent with the approved TSTF.

Licensee Response:

RAI 3.3.3.1-4

ITS Table 3.2-6, Note A, Note F

DOC M1

The DOCs used to justify translation of CTS Note A into ITS Actions do not consider the difference between the CTS and ITS required channels operable. For the CTS, only 1 of 2 available channels are required by TS. Thus, for one inoperable channel no CTS actions are required. For the second inoperable CTS channel, Note A allows 30 days to repair or otherwise place the plant in cold shutdown. ITS provides separate required actions for one channel inoperable, and for two channels inoperable for each TS function.

Comment: Revise DOCs, as appropriate, to address differences between the CTS and ITS required channels. The staff maintains that ITS Condition A and C are new requirements for channels not previously included in TS. The staff also maintains that Condition C is a more restrictive change, requiring a 7 day repair time in place of a 30 day repair time.

Licensee Response:

RAI 3.3.3.1-5

CTS Table 3.2-6, Note F

DOC LA2

DOC LA2 discusses relocation of details related to plant operation to the TRM. The changes relocate remedial actions to perform alternate sampling and analysis for inoperable PAM instrument channels during the CTS 30 day allowed outage time.

Comment: Revise DOC LA2 to provide a safety basis justification for the proposed changes.

Licensee Response:

RAI 3.3.3.1-6

CTS Table 3.2-6, Note K
DOC LA3, DOC L5

CTS Table 4.2-8 requires instrument checks on a daily frequency. ITS SR 3.3.3.1.1 extends the Frequency of these surveillances to 31 days based on NEDO-30851-P-A. The 31 day frequency is consistent with the STS.

Comment: Provide a license amendment citation for the referenced analysis.

Licensee Response:

RAI 3.3.3.1-7

CTS Table 3.2-6, Note K
DOC LA3, DOC L5

ITS Table 3.3.3.1-1, Function 7 is added to address PCIV Position. According to ISTS Table 3.3.3.1-1, Function 8, PCIV Position, footnotes (a) and (b) modify the Function operability requirements. The addition of footnotes (a) and (b) are not discussed in the submittal.

Comment: Provide the applicable change documentation.

Licensee Response:

RAI 3.3.3.1-8

CTS Table 3.2-6, Note K
DOC LA3, DOC L5

Beyond Scope Issue (BSI)- changes to TS limits

In the retyped (smooth copy) ITS Table 3.3.3.1-1, Function 10, Suppression Pool Water Temperature operability is modified by footnote (c), which states: "A channel requires 15 of 16 RTDs to be OPERABLE." This results in a CTS change and a deviation from the STS.

Comment: Inadequate or no discussion or justification is included for the CTS change or the STS deviation. Provide applicable change request documentation. (Licensee to discuss schedule w/ PM for this BSI)

Licensee Response:

RAI 3.3.3.1-9

CTS Table 3.2-6

DOC L7

Beyond Scope Issue (BSI)- change to TS actions

Staff to perform a review of the safety basis to determine the acceptability of proposed DOC L7 which changes CTS (ITS Functions 15-18) remedial actions if channels are not restored to operable status.

Comment: The staff considers this as a BSI (Licensee to discuss schedule with PM and provide applicable change request.)

Licensee Response: (Licensee to discuss w/ reviewer or PM for this BSI)

RAI 3.3.3.1-10

CTS Table 3.2-6

DOC M4

Beyond Scope Issue (BSI) - change to TS actions

Staff to perform a review of the safety basis to determine the acceptability of proposed remedial actions for ITS Table 3.3.3.1-1, Function 2.c, Reactor Vessel Water Level, Refueling Zone.

Comment: Licensee to provide applicable change request and discuss schedule with PM for this BSI.

Licensee Response:

SECTION 3.3.3.2 - Remote Shutdown System

RAI 3.3.3.2-1

CTS 3.2.J.3.a

DOC A3

An explicit CTS requirement is deleted. The option to place the component actuated by the control circuit in the safe shutdown configuration (CTS 3.2.J.3.a) is deleted, retaining the CTS 3.2.J.3. requirement to restore the control circuit to operable status.

Comment: The DOC does not include sufficient supporting documentation to conclude this proposed change is an administrative change to CTS.

Licensee Response:

RAI 3.3.3.2-2

CTS 3.2.J.2.b

DOC LA1

The staff notes that the Bases cannot be used to change TS LCO operability requirements. Thus, the Bases cannot contain the proposed allowance to approve use of alternate channels or circuits for required channels or circuits.

Comment: Revise the submittal (LA1 and L1) to provide justification for deleting all CTS 3.2.J.2.b requirements.

Licensee Response:

RAI 3.3.3.2-3

CTS Table 3.2-10

DOC LA2

Beyond Scope Issue (BSI)

Proposed relocation of RSS components to TRM changes the ISTS format which includes the list of RSS components in the Bases.

Comment: Revise the submittal to adopt ISTS as approved by the TSTF and the staff or provide applicable change request for this BSI. (Licensee to discuss schedule with PM on this BSI)

Licensee Response:

SECTION 3.3.4.1, ATWS-RPT Instrumentation

RAI 3.3.4.1-1

CTS Table 3.2-7

A3/ CLB1

Beyond Scope Issue (BSI) - change to LCO applicability

Channel configuration is changed to 4 channels in one trip system from 2 channels per trip system representing a change to the CTS and the STS format. The ITS Bases describe ATWS-RPT to be a one-out-of-two taken twice trip logic with two channels of level and pressure powered by division I and the redundant channels powered by division II, yet the Bases state ATWS-RPT consist of one trip system.

Comment: Provide additional discussion to support the proposed changes to CTS and STS, or provide applicable change request for this BSI. (Licensee to inform the PM early if this item is considered a BSI).

Licensee Response:

RAI 3.3.4.1-2

CTS Table 3.2-7, Footnote *
DOC A4

DOC A4 states that CTS Footnote *, specifying that an inoperable channel or trip system need not be placed in the tripped condition where this would cause the Trip Function to occur, is clarified by ITS 3.3.4.1 Required Action A.1 which specifies a channel is to be restored to operable status. DOC A4 states that the proposed ITS change is consistent with current requirements since the alternative actions in the CTS is to place the reactor in the startup/hot standby mode within 6 hours if the Required Actions are not performed.

Comment: Explain the equivalence between CTS and ITS requirements.

Licensee Response:

RAI 3.3.4.1-3

CTS Table 3.2-7
DOC A5

ITS requirements which limit remedial actions to restoring the inoperable ATWS-RPT channel to operable status if the channel is inoperable due to an inoperable pump trip breaker have been added to CTS requirements.

Comment: Clarify DOC A5 to show how the additional action given by ITS Required Action A.2 Note is consistent with CTS.

Licensee Response:

RAI 3.3.4.1-4

CTS Table 3.2-7
A7

CTS Table 3.2-7 lists ATWS-RPT Function "trip level settings." The corresponding ITS SR 3.3.4.1.4 lists these "trip level settings" as "Allowable Values". It is not clear that the CTS "trip level settings" are not the physical trip actuation setpoints set into the ATWS-RPT actuation devices. Furthermore, it is assumed that the "Allowable Values" listed in ITS SR 3.3.4.1.4 are the values derived from the setpoint methodology analyses that include instrument channel uncertainties associated with the measured parameter and the installed instrumentation.

Comment: DOC A.7 indicates that the CTS values are treated consistent with the ITS values when determining Function or Channel OPERABILITY, therefore, it is assumed that the change is an acceptable Administrative Change. However, a more complete explanation of the defined terminology is required to ensure the CTS “trip level settings” and the ITS “Allowable Values” are both the administrative (TS limit) values placed on the trip actuation setpoint, that includes all applicable instrument channel and measurement uncertainties.

Licensee Response:

RAI 3.3.4.1-5

CTS Table 3.2-7
DOC L1, L2

CTS Table 3.2-7 provides allowable out-of-service times for single and multiple channel ATWS-RTP inoperability conditions. The CTS AOTs associated with the ATWS-RPT instrumentation are changed consistent with the STS.

Comment: DOC L.1 provides justification for the changes based on the result of analysis GENE-770-06-1-A and states that the Fitzpatrick design is similar to the BWR-4 design used in the analysis. Provide a license amendment citation for the referenced analysis.

Licensee Response:

RAI 3.3.4.1-6

CTS Table 3.2-7
DOC None

The ATWS Reactor Pressure - High RPT setpoint is modified by Note 3 to CTS Table 3.2-7 according to the number of SRVs that are out of service. The corresponding ITS SR 3.3.4.1.4 changes the setting also but bases the changed setting on the number of SRVs that are OPERABLE.

Comment: This change is not discussed or justified. Provide change documentation for the CTS change.

Licensee Response:

SECTION 3.5 - ECCS

Section 3.5.1 ECCS - Operating

RAI 3.5.1-1 ITS SR 3.5.1.5 and SR 3.5.1.12
JFD CLB5

SR 3.5.1.5 and proposed SR 3.5.1.12 address the LPCI inverters. However, there is no Conditions or Required Actions for inoperable inverters in these LCOs.

Comment: What are the appropriate Condition and Required Actions for an inoperable LPCI converter? These reasons need to be included in the ITS. JFDs may need to be revised as appropriate.

Licensee Response:

SECTION 3.5.2 ECCS - Shutdown

No comments.

SECTION 3.5.3 RCIC System

RAI 3.5.3-1 CTS 4.5.E.1.d, Flow Rate Test
DOC M3
ITS SR 3.5.3.5, SR 3.5.3.6
JFD DB3

The licensee proposed to divide the current requirement of CTS 4.5.E.1.d, “that RCIC delivers at least 400 gpm against a system head corresponding to a reactor vessel pressure of 1195 psig to 150 psig,” into two separate Surveillance Requirements: SR 3.5.3.5 and SR 3.5.3.6. The JFD states that the brackets have been removed and the proper plant specific values have been provided. However, these values are altered from those in CTS. The JFD further states that these are “nominal values at rated conditions...very close to the lower range where RCIC is required to be operable...at the same time allows some flexibility to establish the condition.”

Comment: The justification provided in DOC M3 and JFD DB3 do not support how these pressure ranges were derived and why these values are considered acceptable. Provide additional technical justifications for the derivation and acceptability of these values. Otherwise, this item will be treated as a beyond scope issue.

Licensee Response:

SECTION 3.5 - ECCS

Section 3.5.1 ECCS - Operating

Beyond Scope Issues (BSI) - JFD DB3, DB4

ITS 3.5.1, ECCS - Operating, INSERT ACTION A, INSERT ACTION B, ACTIONS C, E, and G, INSERT ACTION H, ACTIONS I and J

Comment: These modifications and additions to the STS are beyond the scope of the ITS conversion. They are neither conforming to the CTS nor adopting STS. Provide applicable change request documentation and inform the PM the schedule for this BSI issue.

Licensee Response:

Section 3.5.3 - RCIC System

Beyond Scope Issue (BSI) - CTS 4.5. E.1.e, Testable Check Valves

DOC M6

ITS SR 3.5.3.3 (Insert SR3-A)

JFD CLB1

The FREQUENCY added to ITS SR 3.5.3.3, "Once each startup prior to exceeding 25% RTP, " is beyond the scope of the ITS conversion review.

Comment: It is not contained in the CTS nor a part of the STS . Provide applicable change request documentation and its schedule for this BSI to the PM.

Licensee Response: (Licensee to inform reviewer or PM of resolution)

SECTION 3.7 - PLANT SYSTEMS

RAI 3.7.1-1

DOC L2

CTS 3.0.C

CTS 3.5.B.4

ITS 3.7.1 Actions D & E

STS 3.7.1 Actions D & E

TS Bases markup JFD DB2

In the event both RHRSW subsystems are inoperable for reasons other than one inoperable RHRSW pump in each subsystem (that is three or four RHRSW pumps could be inoperable), CTS 3.0.C requires a shutdown, because CTS 3.5 provides no action requirements to address this loss-of-function condition. In contrast, the STS in Action D permits 8 hours to restore one subsystem to operable status (i.e., to the level of degradation addressed by STS/ITS Actions A and C) before requiring a shutdown by Action E. ITS adopts this 8-hour allowance, but DOC L2 fails to explicitly address why this is acceptable in spite of the apparent difference between the

FitzPatrick RHRSW design and the design assumed in the STS (Hatch). Specifically, as indicated in the markup of the STS Bases Background, the FitzPatrick design requires two, not one, RHRSW pumps to provide the required cooling capability (either two in one subsystem or one in each subsystem) to maintain safe shutdown conditions. Apparently, in the STS, one of the four RHRSW pumps is sufficient to maintain safe shutdown.

Comment: Revise DOC L2 to address why Action D is acceptable given the apparent design difference.

Licensee Response:

RAI 3.7.2-1
ITS SR 3.7.2.2

ITS adopts a new requirement to verify UHS temperature is $\leq 85^{\circ}\text{F}$ in SR 3.7.2.2. However, FSAR sections 9.7.1.2 and 9.7.2.3 both appear to indicate the limit should be $\leq 82^{\circ}\text{F}$.

Comment: Revise the submittal to resolve this difference between the ITS and the FSAR.

Licensee Response:

RAI 3.7.2-2
Bases Insert BKGRD 3 (STS markup page B 3.7-8)

Recommend defining the term “frazil ice” in the Bases. In addition, the referenced insert includes two statements that may need clarification.

(a) “The capacity of these deicing heaters keeps the bars at approximately 34°F during periods when subcooling occurs and the plant is operating under normal conditions with the circulating water system in service.”

Comment: Explain what is meant by subcooling in this context. Explain how the circulating water system operation impacts the ESW operation with respect to the deicing heaters.

(b) “The heating system has been designed to be very reliable and to ensure continuous plant operation and to mitigate the consequences of a design basis event.”

Comment: Explain how this statement aids in understanding the basis for ITS 3.7.2

Licensee Response:

RAI 3.7.2-3

ITS SR 3.7.2.1 and associated Bases

ITS adds a surveillance requirement to verify ES pump screen well level ≥ 236.5 feet [above] mean sea level. According to STS markup Bases Insert BKGRD 3, minimum lake level would be about 243 ft elevation (above sea level).

Comment: Revise the bases (a) to explain the basis for SR limit and (b) to consistently refer to elevation, i.e., above mean sea level.

Licensee Response:

RAI 3.7.2-4

ITS 3.7.2 Actions

ITS Actions A and B are independent of each other. To preclude unlimited operation with the LCO not met by alternately entering and exiting two independent Actions associated with the same LCO, such as in proposed ITS 3.7.2, the STS would include an additional Completion Time for the Required Action to restore the inoperable feature to operable status.

Comment: Add a Completion Time of "14 days from discovery of failure to meet the LCO" to ITS Required Actions A.1 and B.1. Also explain these Completion Times in the Bases for these Actions.

Licensee Response:

There were no comments on the non-adoption of STS 3.7.4

There were no comments on ITS 3.7.3 (STS 3.7.4)

There were no comments on ITS 3.7.4 (STS 3.7.5)

There were no comments on ITS 3.7.5 (STS 3.7.6)

There were no comments on ITS 3.7.6 (STS 3.7.7)

RAI 3.7.7-1

DOC M1
DOC LA1
ITS SR 3.7.7.1
DOC L1, L2

CTS 3/4.10.C

ITS requires a minimum of 21 ft 7 inches of water (above the top of the fuel) in the SFP and requires verifying this every 7 days, but only when irradiated fuel is being moved in the spent fuel storage pool. The CTS requires 33 ft of water in the SFP (about 17 feet above the top of the fuel) and requires verifying this level daily.

(1) DOC LA1 states that the 21 ft 7 inches required by the ITS assures that the a refueling accident meets UFSAR 14.6.1.4. This section of the FSAR provides no information on the assumed SFP level during a refueling accident. The only reference to SFP level given in the FSAR as being assumed for a refueling accident is the "normal level of 25 feet" found in section 9.3.5.

Comment: Revise the submittal with adequate justification for the 21 ft 7 inches level limit.

(2) DOC L2 explains that the weekly frequency for checking pool level is acceptable because the level is maintained constant and because an alarm would alert operators before level dropped to the limit - implying that level is normally maintained above the 21 ft 7 inches level limit. However, DOC L1 indicates that unless fuel is being moved in the pool, the level may be maintained lower, but at or above the current limit (about 17 ft), a limit which is being moved to the FSAR.

Comment: Will the daily verification be retained in the FSAR for the lower limit? And is there a level alarm to alert operators should level approach the lower limit? Revise the submittal to discuss usual plant practice for maintaining and monitoring pool level.

Licensee Response:

RAI CTS 3/4.11.C-1
DOC LA1L
CTS 3/4.11.C

(1) The CTS requirements for the battery room ventilation system are being moved entirely to the TRM. This appears to be an R-type change rather than an LA-type change.

Comment: Revise the submittal with the correct classification for this specification relocation.

(2) DOC LA1 incorrectly references CTS 3/4.9.D (diesel generator operability in Modes 4 and 5) but should reference CTS 3/4.9.E (battery operability)

Comment: Correct the reference.

(3) The Cooper Nuclear Station ITS Safety Evaluation addressed relocation of the battery room ventilation as follows: (See RAI CTS 3/4.12.D and 3/4.12.D - R.1 Battery Room Ventilation for the Cooper Station ITS issue.)

The requirements in CTS 3/4.12.D concerning operability and testing of the battery room exhaust fans are proposed to be relocated to the TRM. This system is not assumed to function during an accident nor does it act to mitigate the consequences of an accident. The control building essential ventilation system provides ventilation flow to essential areas of the control building during emergency conditions. The battery room ventilation system was designed only to ensure the removal of hydrogen generated by the station batteries, a function no longer necessary due to the use of lead-calcium cells which do not generate significant amounts of hydrogen. The operability and testing requirements contained in CTS 3/4.12.D are not required to be included in the ITS to provide adequate protection of the public health and safety. Thus, CTS 3/4.12.D does not meet any of the criteria in 10 CFR 50.36 and may be relocated out of the CTS. Any changes to these requirements regarding the battery room exhaust fans after they are relocated to the TRM will require a safety evaluation pursuant to 10 CFR 50.59. Therefore, under 10 CFR 50.59, sufficient regulatory controls exist to ensure continued protection of the public health and safety, and the relocation of the CTS requirements for the battery room exhaust fans to the TRM is acceptable.”

DOC LA1 seems to imply that the ventilation system is required to maintain proper temperature in the battery room. It seems to say that if the ventilation system is inoperable, the associated battery would be declared inoperable, even if the temperature in the room is acceptable.

Comment: Review the basis for this relocation in light of the relocation justification for the Cooper battery room ventilation system, and verify whether an operable ventilation system is required for battery operability. Revise the submittal based on this review as appropriate.

Licensee Response:

SECTION 3.10 - SPECIAL OPERATIONS

RAI 3.10-1

ITS 3.10.1
DOC LA1 and DOC L2
TYPOs

Comment: The seventh sentence in DOC LA1 that reads, “A minimum temperature limit of approximately 200°F...”, should read, “... approximately 212°F...”. The third sentence in DOC L that reads, “... reactor coolant temperature is \geq 212°F ...”, should read “... reactor coolant temperature is $>$ 212°F ...”.

Licensee Response:

RAI 3.10-2

Bases ITS 3.10.1 Background

JFD X2

The fourth paragraph on hydrostatic testing has been deleted because it is covered adequately in B 3.4.[11] (P/T Limits), and it is an unnecessary level of detail for the Bases.

Comment: The detail of the deleted paragraph is not in B 3.4.[11] on P/T Limits. Explain why the detail is excessive and submit a TSTF change to correct the STS Bases.

Licensee Response:

RAI 3.10-3

Bases ITS 3.10.1 LCO

JFD X3

The last sentence of the first paragraph of the LCO section of the Bases is deleted in the ITS because it incorrectly states that the ASME inservice test requires the S/RVs to be gagged.

Comment: Submit a TSTF to correct the STS.

Licensee Response:

RAI 3.10-4

ITS 3.10.3 Single Control Rod Withdrawal-Hot Shutdown (JFD X1), and

ITS 3.10.4 Single Control Rod Withdrawal-Cold Shutdown (JFD X1)

Bases 3.10.3 (JFD X2)

Bases 3.10.4 (JFD X2)

The ITS specifications for single control rod withdrawal in modes 3 and 4 have added the requirement to meet LCO 3.3.8.2 on RPS Electrical Power Monitoring in Mode 5 when in these Special Operations specifications.

Comment: The absence of the requirement to meet LCO 3.3.8.2 when entering ITS 3.10.3 and ITS 3.10.4, appears to be an oversight in the STS. Submit a TSTF to correct the STS.

Licensee Response:

RAI 3.10-5

ITS 3.10.5 Required Action A.1

JFD X1

The ITS deletes the word "mechanism" from STS 3.10.5 Required Action A.1 since the removal of the control rod is also permitted.

Comment: Submit a TSTF to correct the STS.

Licensee Response:
