Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. Fitzpatrick NPP
P.O. Box 110
Lycoming, NY 13093
Tel 315 349 6024 Fax 315 349 6480

T.A. Sullivan
Vice President, Operations-JAF

June 11, 2002
JAFP-02-0124

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop O-P1-17
Washington, D.C. 20555

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
License No. DPR-59

Revision K to Proposed Technical Specification Change (License Amendment) Conversion to Improved Standard Technical Specifications

References: see last page of letter

Dear Sir,

This letter and the associated attachments provides Revision K to the previously submitted application for amendment to the James A. FitzPatrick Technical Specifications (Reference 1), as supplemented by References 2, 3, 4, 5, and 7 for converting the current Technical Specifications (CTS) to the Improved Technical Specifications (ITS) consistent with the Improved Standard Technical Specifications (NUREG-1433, Revision 1).

Revision K (Attachment 1) to the Reference 1, 2, 3, 4, 5, and 7 submittals include certain changes requested by the NRC Staff as a result of their review of Revision J (Reference 7). The submittal also provides revised pages based on the NRC approval of TS Amendment 273. Additionally, minor changes are made to correct editorial errors in the previous submittals. Each Chapter/Section includes a summary of the changes to the affected Chapter/Section.

The Insert and Discard Instructions are included in Attachment 2 to allow merging Revision K with the existing submittal. The clean typed ITS and Bases in Volumes 2, 3, and 4, and the CTS markup pages in CTS order in Volume 5 are not being updated since these Volumes are duplicates of each individual Specification located in Volumes 6 through 19.

A001

There are no new commitments contained in this letter. Should you have any questions, please contact Mr. Andrew Halliday at (315) 349-6055.

Very Truly Yours,

T. A. Sullivan
Vice President, Operations - JAF

Attachments: 1) Revision K to the JAF ITS Submittal
2) Insert and Discard Instructions

cc:

Regional Administrator
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. N. B. Le
U. S. Nuclear Regulatory Commission
Mail Stop O-7H3
Washington, DC 20555 P. O. Box 134

Mr. Guy Vissing, Project Manager
Project Directorate I
Division of Licensing Project Management
U. S. Nuclear Regulatory Commission
Mail Stop 8C2
Washington, DC 20555

Resident Inspector's Office
James A. FitzPatrick Nuclear Power Plant
U. S. Nuclear Regulatory Commission
P. O. Box 134
Lycoming, NY 13093

Mr. William M. Flynn
New York State Energy Research and Development Authority
Corporate Plaza West
286 Washington Avenue Extension
Albany, New York 12203-6399

Mr. Paul Eddy
NYS Department of Public Service
3 Empire Plaza
Albany, New York 12223

Mr. William D. Beckner, Chief
Technical Specifications Branch
U. S. Nuclear Regulatory Commission
Mail Stop O-7H3
Washington, DC 20555

References:

1. NYPA letter, J. Knubel to USNRC Document Control Desk, Proposed Technical Specification Change (License Amendment) Conversion to Improved Standard Technical Specifications (JPN-99-008), dated March 31, 1999 (TAC No. MA5049)

2. NYPA letter, J. Knubel to USNRC Document Control Desk, Revision B to Proposed Technical Specification Change (License Amendment) Conversion to Improved Standard Technical Specifications (JPN-99-018), dated June 1, 1999

3. NYPA letter, Michael J. Colomb to USNRC Document Control Desk, Revision C to Proposed Technical Specification Change (License Amendment) Conversion to Improved Standard Technical Specifications (JAFP-99-0278), dated October 14, 1999

4. Entergy Nuclear Northeast letter, T. A. Sullivan to USNRC Document Control Desk, Revisions D, E, F, G, and H to Proposed Technical Specification Change (License Amendment) Conversion to Improved Standard Technical Specifications (JAFP-01-0133), dated May 31, 2001

5. Entergy Nuclear Northeast letter, T. A. Sullivan to USNRC Document Control Desk, Revision I to Proposed Technical Specification Change (License Amendment) Conversion to Improved Standard Technical Specifications (JAFP-01-0234), dated October 18, 2001

6. Entergy Nuclear Northeast letter, T. A. Sullivan to USNRC Document Control Desk, James A. FitzPatrick (JAF) Improved Technical Specifications (ITS) Submittal (JAFP-02-0029), dated February 6, 2002

7. Entergy Nuclear Northeast letter, T. A. Sullivan to USNRC Document Control Desk, Revision J to Proposed Technical Specification Change (License Amendment) Conversion to Improved Standard Technical Specifications (JAFP-02-0098), dated April 26, 2002

BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
Entergy Nuclear Operations, Inc.	)	Docket No. 50-333
James A. FitzPatrick Nuclear Power Plant	)	

APPLICATION FOR AMENDMENT TO OPERATING LICENSE

Entergy Nuclear Operations, Inc. requests an amendment to the Technical Specifications (TS) contained in Appendix A to Facility Operating License DPR-59 for the James A. FitzPatrick Nuclear Power Plant. This application is filed in accordance with Section 10 CFR 50.90 of the Nuclear Regulatory Commission's regulations.

This application for amendment to the FitzPatrick Technical Specifications proposes to convert the FitzPatrick current Technical Specifications (CTS) to be consistent with the Improved Standard Technical Specifications (ISTS) in NUREG-1433, Revision 1, dated April 1995. The proposed license amendment request was prepared considering the guidance of Nuclear Energy Institute (NEI) NEI 96-06, "Improved Technical Specifications Conversion Guidance," dated August 1996.

The Proposed license amendment request to convert the FitzPatrick CTS to the FitzPatrick Improved Technical Specifications (ITS) is enclosed with this application.

Entergy Nuclear Operations, Inc.

T. A. Sullivan
Vice President, Operations-JAF

STATE OF NEW YORK
COUNTY OF OSWEGO
Subscribed and sworn to before me
this 11th day of June 2002.

Notary Public

BONNIE S. BOSTIAN # 4857051
Notary Public, State of New York
Oswego County
My Commission Expires June 30, 2002

ATTACHMENT 1

SUMMARY OF CHANGES TO ITS SECTION 3.0 - REVISION K

Source of Change	Summary of Change	Affected Pages
Misc. editorial corrections	These editorial changes were identified during the preparation of the final ITS submittal: Revision J inadvertently failed to add a 'bubble' reference to DOC L4 or revise CTS 4.0.C on CTS mark-up page 30a (p 3 of 5).	**Section 3.0** CTS mark-up, p 3 of 5

JAFNPP

~~4.0~~ Continued

~~D.~~ Entry into an OPERATIONAL CONDITION (mode) or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION (mode) or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through OPERATIONAL CONDITIONS (modes) required to comply with ACTION requirements or that are part of a shutdown of the plant. Exceptions to these requirements are stated in the individual specifications.

~~E.~~ ~~When a system, subsystem, train, component or device is~~ determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in COLD SHUTDOWN within the following 24 hours. This specification is not applicable when in Cold Shutdown or Refuel Mode.

~~F.~~ Equipment removed from service or declared inoperable to comply with required actions may be returned to service under administrative control solely to perform testing required to demonstrate its operability or the operability of other equipment. This is an exception to LCO ~~3.0.0.~~

Amendment No. ~~83, 184, 198, 227, 241,~~ 262

~~4.0~~ Continued

[SR 3.0.3] that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance ~~when the allowable outage time limits of the ACTION requirements are less than 24 hours.~~ Surveillance requirements do not have to be performed on inoperable equipment.

[SR 3.0.1]

D. Entry into an OPERATIONAL CONDITION (mode) shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been ~~performed~~ met within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to Operational Modes as required to comply with ACTION requirements or that are part of a shutdown of the plant.

[SR 3.0.4]

~~E.~~ ~~Surveillance Requirements~~ for inservice testing of components shall be applicable as follows:

1. Inservice testing of pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f), except where specific written relief has been granted by the NRC pursuant to 10 CFR 50, Section 50.55a(f)(6)(i). The inservice testing and inspection program is based on an NRC approved edition of and addenda to, Section XI of the ASME Boiler and Pressure Vessel Code which is in effect 12 months prior to the beginning of the inspection interval.

REVISION ~~0~~ K

Page 3 of 5

AMD # 262

SUMMARY OF CHANGES TO ITS SECTION 3.3 - REVISION K

Source of Change	Summary of Change	Affected Pages
TS Amendment 273	Incorporates TS Amendment 273 into ITS. TSA 273 revised the ATWS RPT instrument setpoints for Reactor Pressure - High to a single setpoint, independent of the number of SRVs that are operable.	**Section 3.3.4.1** CTS mark-up, pp 2 of 6 and 4 of 6 DOC A9 - deleted (p 3 of 8); DOC M2 (p 4 of 8) ITS mark-up, p 3.3-35 ITS Bases mark-up, pp Insert page B 3.3-94, B 3.3-96, B 3.3-98, B 3.3-100 and Insert page B 3.3-100 Retyped ITS p 3.3-31 Retyped ITS Bases pp B 3.3-90, B 3.3-92, B 3.3-94, B 3.3-95 and B 3.3-96

SUMMARY OF CHANGES TO ITS SECTION 3.3 - REVISION K

Source of Change	Summary of Change	Affected Pages
NRC telecon	The Modes of Applicability for ITS 3.3.6.1, Functions 1.f and 2.f (Main Steam Line Radiation - High) is revised to be consistent with CTS.	**Section 3.3.6.1** CTS mark-up, p 3 of 22 DOC L13 - deleted (p 22 of 25) NSHC L13 - deleted (pp 19 of 32 and 20 of 32) ITS mark-up, pp 3.3-57 and Insert page 3.3-58 JFD DB6 (p 4 of 5) ITS Bases mark-up, Insert page B 3.3-158, Insert page B 3.3-161 and Insert page B 3.3-164b Retyped ITS pp 3.3-52 and 3.3-53 Retyped ITS Bases pp B 3.3-160 and B 3.3-164

SUMMARY OF CHANGES TO ITS SECTION 3.3 - REVISION K

Source of Change	Summary of Change	Affected Pages
NRC telecon	Provides a Bases cross reference from ITS SR 3.3.1.1.12 to ITS SR 3.3.2.1.8 regarding calibration of the recirculation loop flow signal portion of the channel. An additional CHANNEL CALIBRATION surveillance (ITS SR 3.3.2.1.8) is added as well as NOTES to SR 3.3.2.1.5 and SR 3.3.2.1.8 regarding calibration of the recirculation loop flow signal portion of the channel.	**Section 3.3.1.1** NUREG Bases mark-up, p Insert page B 3.3-30 Bases JFD CLB5 (p 1 of 4) Retyped ITS Bases p 3.3-33 **Section 3.3.2.1** CTS mark-up, p 6 of 10 and 8 of 10 DOCs A7 (p 2 of 9) and L5 (p 7 of 9) NUREG mark-up pp 3.3-19 and 3.3-20 JFDs CLB1 and DB4 (pp 1 of 3 and 2 of 3) NUREG Bases mark-up, B 3.3-54, Insert page B 3.3-54 Retyped ITS pp 3.3-18, 3.3-19 and 3.3-20 Retyped ITS Bases pp B 3.3-56 through B 3.3-59
Misc. editorial corrections	These editorial changes were identified during the preparation of the final ITS submittal: 1. ITS 3.3.6.1 DOC M4 (p 7 of 25) refers to Note 2. There is only one Note; therefore, the DOC has been corrected. 2. ITS 3.3.1.1 DOC M8 (p 9 of 25) refers to Note 3. This should refer to Note 2; therefore, the DOC has been corrected.	**Section 3.3.6.1** DOC M4 (p 7 of 25) **Section 3.3.1.1** DOC M8 (p 9 of 25)

TECHNICAL CHANGES - MORE RESTRICTIVE

M5 (continued)

The addition of new requirements (Surveillances) to the current Technical Specifications constitutes a more restrictive change necessary to ensure the RPS Functions are maintained Operable. This change is consistent with NUREG-1433, Revision 1. This change is not considered to result in any reduction to safety.

M6 ITS SR 3.3.1.1.1, increases the frequency for performing the Channel Checks in CTS Table 4.1-1 from the current Daily to every 12 hours for the Functions listed below:

Reactor Pressure - High
Drywell Pressure - High
Reactor Vessel Water Level - Low (Level 3)
Scram Discharge Volume Water Level - High
(DP transmitter/trip unit)
Turbine First Stage Pressure Permissive (see LA12)

This change to the requirements (Surveillances) of the current Technical Specifications constitutes a more restrictive change necessary to ensure the RPS Functions are maintained Operable. This change is consistent with NUREG-1433, Revision 1. This change is not considered to result in any reduction to safety.

M7 ITS SR 3.3.1.1.5 was added to verify SRM and IRM channels overlap prior to fully withdrawing SRMs. This change to the requirements (Surveillances) of the current Technical Specifications constitutes a more restrictive change necessary to ensure the RPS Functions are maintained Operable.

M8 CTS 4.1.A specifies that the response time of the reactor protection system trip functions listed shall be demonstrated to be within its limit once per 24 months. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals. In ITS SR 3.3.1.1.15 the RPS RESPONSE TIME test must be performed every 24 months on a STAGGERED TEST BASIS. Note 2 of this SR specifies that "n" equals 2 channels for the purpose of determining the STAGGERED TEST BASIS Frequency. Therefore, SR 3.3.1.1.15 will require all channels requiring response time testing to be tested in two (2) surveillance intervals. This change is more restrictive since at least eight (8) ITS 3.3.1.1 Function 5 (Main Steam Isolation Valve - Closure) channels and four (4) ITS 3.3.1.1 Function 8 (Turbine Stop Valve - Closure) channels must be tested each interval

PA2

INSERT SR 3.3.1.1.10

For Functions 8 and 9, this SR is associated with the enabling circuit sensing first stage turbine pressure.

PA2 CLB6

INSERT SR 3.3.1.1.12-1

Physical inspection of the position switches is performed in conjunction with SR 3.3.1.1.12 for Function 5 and 8 to ensure that the switches are not corroded or otherwise degraded. For Function 7.b, the CHANNEL CALIBRATION must be performed utilizing a water column or similar device to provide assurance that damage to a float or other portions of the float assembly will be detected. For Functions 8 and 9, SR 3.3.1.1.12 is associated with the enabling circuit sensing first stage turbine pressure as well as the trip function.

CLB9

INSERT SR 3.3.1.1.12-2

Note 3 to SR 3.3.1.1.9 and the Note to SR 3.3.1.1.12 concerns the Neutron Flux-High (Flow Biased) Function (Function 2). Note 3 to SR 3.3.1.1.9 excludes the recirculation loop flow signal portion of the channel, since this portion of the channel is calibrated by SR 3.3.1.1.12. Similarly, the Note to SR 3.3.1.1.12 excludes all portions of the channel except the recirculation loop flow signal portion, since they are covered by SR 3.3.1.1.9. Since the recirculation loop flow signal is also a portion of the Rod Block Monitor (RBM) - Upscale control rod block Function channels (Table 3.3.2.1-1, Control Rod Block Instrumentation, Function 1.a), satisfactory performance of SR 3.3.1.1.12 also results in satisfactory performance of SR 3.3.2.1.8 for the associated RBM-Upscale control rod block Function channels.

K

Reactor Pressure-High and Reactor Vessel Water Level-Low (Level 3) Function sensors (Functions 3 and 4, respectively) are excluded from the RPS RESPONSE TIME testing (Ref. 19). However, prior to the CHANNEL CALIBRATION of these sensors a response check must be performed to ensure adequate response. This testing is required by Reference 20. Personnel involved in this testing must have been trained in response to Reference 21 to ensure they are aware of the consequences of instrument response time degradation. This response check must be performed by placing a fast ramp or a step change into the input of each required sensor. The personnel, must monitor the input and output of the associated sensor so that simultaneous monitoring and verification may be accomplished.

DB9

INSERT SR 3.3.1.1.9

The Frequency of SR 3.3.1.1.9 is based upon the assumption of a 92 day calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.3.1.1 - REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 Function 2.d has been deleted. The Downscale trip has been removed from the CTS as documented in License Amendment 227. The following Functions have been renumbered as required.

CLB2 SR 3.3.1.1.4 has been added (a functional test of each RPS automatic scram contactor) consistent with current requirements. This Surveillance was added to allow the Surveillance Frequency extensions of the automatic RPS Functions per NEDC-30851-P-A, Technical Specification Improvement Analyses for BWR Reactor Protection System, since the JAFNPP design is different than the generic BWR model used in NEDC-30851-P-A. Therefore, the Bases description in ISTS SR 3.3.1.1.5 of the CHANNEL FUNCTIONAL TEST of the manual scram function has been deleted and replaced with the description of the RPS channel test switches.

CLB3 Consistent with CTS 4.1.A, the measurement of the sensor during response time testing is not required. Appropriate Bases as well as references have been included consistent with TSTF 322 R1.

CLB4 The Bases of ITS SR 3.3.1.1.15 has been modified, to require RPS RESPONSE TIME TESTING consistent with the current licensing basis, and as modified in M8.

CLB5 ISTS SR 3.3.1.1.3, the requirement to adjust the channels to conform to a calibrated signal every 7 days has been deleted since this requirement is currently being performed along with the 92 day channel functional test. This adjustment will be performed in accordance with SR 3.3.1.1.8, the 92 day CHANNEL FUNCTIONAL TEST. This is reflected in the Bases of SR 3.3.1.1.8. Subsequent SRs have been renumbered, as applicable. In addition, the recirculation loop flow signal portion of Function 2.b is calibrated by SR 3.3.1.1.12. Thus, Notes have been added to SR 3.3.1.1.9 and SR 3.3.1.1.12 for clarity and since the recirculation loop flow signal is also a portion of the RBM - Upscale control rod block Function channels, a reference to ITS SR 3.3.2.1.8 has been added to the ITS SR 3.3.1.1.12 Bases. K

CLB6 These requirements have been added in accordance with CTS Table 4.1-1 Note 6 and Table 4.1-2 Note 5, as documented in LA11.

CLB7 The Channel Functional Test Frequency of SR 3.3.1.1.11 has been increased from 18 months to 24 months in accordance with CTS Table 4.1-1. The Frequency is consistent with the JAFNPP fuel cycle.

CLB8 SR 3.3.1.1.10 Surveillance Frequency has been modified to be consistent with the frequency in CTS Table 4.1-1 Note 6 and approved in License Amendment No. 89.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.3.1.1 - REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB9 The specific details concerning response checks have been added to the Bases of SR 3.3.1.1.12 in accordance with License Amendment No. 235.

PLANT-SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 The Specification has been modified to reflect plant specific nomenclature.

PA2 Editorial changes have been made for enhanced clarity or to be consistent with other places in the Bases.

PA3 Grammatical or typographical error corrected.

PA4 This Table has been deleted because it provides generic and not plant specific types of information. The information in the Table could be misleading as to which plant specific analyses take credit for these channels to perform a function during accident and transient scenarios.

PA5 The Reviewer's Note has been deleted.

PA6 The quotations used in the Bases References have been removed. The Writer's Guide does not require the use of quotations.

PA7 The Bases description has be modified to better reflect the Applicability of the Functions in Table 3.3.1.1-1.

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The Bases have been modified to reflect the JAFNPP specific design.

DB2 The brackets have been removed and the proper plant specific reference have been provided.

DB3 The Bases description of Function 2.b, Average Power Range Monitor Flow Biased Simulated Thermal Power-High Function has been modified to be consistent with the JAFNPP design. The filter circuit has been removed consistent with BWR Owner's Group Long Term Stability Solutions (Refs. 5 and 6). Changes have been made in the Bases as a result of this design difference. References have been renumbered, as applicable. In addition, ISTS 3.3.1.1.14 has been deleted because the JAFNPP RPS does not utilize an APRM Flow Biased Simulated Thermal Power-High time constant. Subsequent SRs have been renumbered, as applicable.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.3.1.1 - REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB4 All channels are not required to respond within a specified response time and all channels do not have a specified Allowable Values (e.g. Manual Scram Function channels), therefore the Bases has been revised as necessary.

DB5 The description of the setpoint calculation methodology has been revised to reflect the plant specific methodology.

DB6 The Bases has been revised to reflect the appropriate references.

DB7 The Bases has been revised to reflect the safety analysis. At low powers (e.g., < 29% RTP) the scram from the TSV and TCV is not required; however, the turbine generator can remain online (and trip with resultant pressure transient) below this power level. The TSV and TCV Fast Closure (turbine trip or main generator trip) provide a direct reactor scram when ≥ 29% RTP. When < 29% RTP, a turbine or main generator trip will not result in a direct scram, but should the pressure transient reach the setpoint for the Reactor High Pressure trip, a scram would occur (i.e., is credited to occur from the Reactor High Pressure trip). Since turbine operation below 29% RTP includes MODE 1 and MODE 2, the necessary applicability of the Reactor High Pressure trip is consistent with specifying MODE 1 and 2. References have been included as applicable. Subsequent references have been renumbered as required.

DB8 The Bases has been revised to reflect the setpoint calculation methodology assumptions.

DB9 SR 3.3.1.1.9 has been added to perform a CHANNEL CALIBRATION every 92 days for Function 7.a (Scram Discharge Volume Water Level – High, Differential Pressure Transmitter/Trip Unit) consistent with CTS Table 4.1-2. The Frequency is consistent with the setpoint calculation methodology for this Function. In addition, the Frequency for ISTS SR 3.3.1.1.11, the 184 day CHANNEL CALIBRATION requirement for the APRM Functions, has been changed to 92 days (ITS SR 3.3.1.1.9), consistent with the CTS. The Bases description has been reordered and renumbered as required.

DB10 Changes have been made to reflect those changes made to the Specification.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.3.1.1 - REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

TA1 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 332, Revision 1 have been incorporated into the revised Improved Technical Specifications. However, NEDO-32291-A, Supplement 1 has not yet been adopted by JAFNPP. Therefore, this portion of the TSTF has not been incorporated.

TA2 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 205, Revision 3 have been incorporated into the revised Improved Technical Specifications.

TA3 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 231, Revision 1 have been incorporated into the revised Improved Technical Specifications.

TA4 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 355, Revision 0, as modified by WOG-ED-25, have been incorporated into the revised Improved Technical Specifications.

DIFFERENCE BASED ON A SUBMITTED, BUT PENDING TRAVELER (TP)

None

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X1 NUREG-1433, Revision 1, Bases reference to "the NRC Policy Statement" has been replaced with 10 CFR 50.36(c)(2)(ii), in accordance with 60 FR 36953 effective August 18, 1995. Subsequent References have been renumbered, as applicable.

X2 The SR 3.3.1.1.13 and SR 3.3.1.1.14 Frequencies have been modified from 18 months to 24 months consistent with the JAFNPP fuel cycle.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.1.9 and SR 3.3.1.1.12 (continued)

this portion of the channel is calibrated by SR 3.3.1.1.12. Similarly, the Note to SR 3.3.1.1.12 excludes all portions of the channel except the recirculation loop flow signal portion, since they are covered by SR 3.3.1.1.9. Since the recirculation loop flow signal is also a portion of the Rod Block Monitor (RBM)-Upscale control rod block Function channels (Table 3.3.2.1-1, Control Rod Block Instrumentation, Function 1.a), satisfactory performance of SR 3.3.1.1.12 also results in satisfactory performance of SR 3.3.2.1.8 for the associated RBM-Upscale control rod block Function channels.

Reactor Pressure-High and Reactor Vessel Water Level-Low (Level 3) Function sensors (Functions 3 and 4, respectively) are excluded from the RPS RESPONSE TIME testing (Ref. 19). However, prior to the CHANNEL CALIBRATION of these sensors a response check must be performed to ensure adequate response. This testing is required by Reference 20. Personnel involved in this testing must have been trained in response to Reference 21 to ensure they are aware of the consequences of instrument response time degradation. This response check must be performed by placing a fast ramp or a step change into the input of each required sensor. The personnel, must monitor the input and output of the associated sensor so that simultaneous monitoring and verification may be accomplished.

The Frequency of SR 3.3.1.1.9 is based on the assumption of a 92 day calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis. The Frequency of SR 3.3.1.1.12 is based upon the assumption of a 24 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

SR 3.3.1.1.10

Calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in Table 3.3.1.1-1. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.1.10 (continued)

is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology. For Functions 8 and 9, this SR is associated with the enabling circuit sensing first stage turbine pressure.

The Frequency of 184 days is based on the reliability, accuracy, and lower failure rates of the solid-state electronic Analog Transmitter/Trip System components.

SR 3.3.1.1.13

The LOGIC SYSTEM FUNCTIONAL TEST demonstrates the OPERABILITY of the required trip logic for a specific channel. The functional testing of control rods (LCO 3.1.3), and SDV vent and drain valves (LCO 3.1.8), overlaps this Surveillance to provide complete testing of the assumed safety function.

The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency.

SR 3.3.1.1.14

This SR ensures that scrams initiated from the Turbine Stop Valve–Closure and Turbine Control Valve Fast Closure, EHC Oil Pressure–Low Functions will not be inadvertently bypassed when THERMAL POWER is ≥ 29% RTP. This involves calibration of the bypass channels. Adequate margins for the instrument setpoint methodologies are incorporated into the actual setpoint. Because main turbine bypass flow can affect this setpoint nonconservatively (THERMAL POWER is derived from turbine first stage pressure), the main turbine bypass valves must remain closed during an inservice calibration at THERMAL POWER ≥ 29% RTP to ensure that the calibration is valid.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.1.14 (continued)

If any bypass channel's setpoint is nonconservative (i.e., the Functions are bypassed at ≥ 29% RTP, either due to open main turbine bypass valve(s) or other reasons), then the affected Turbine Stop Valve–Closure and Turbine Control Valve Fast Closure, EHC Oil Pressure–Low Functions are considered inoperable. Alternatively, the bypass channel can be placed in the conservative condition (nonbypass). If placed in the nonbypass condition, this SR is met and the channel is considered OPERABLE.

The Frequency of 24 months is based on engineering judgment and reliability of the components.

SR 3.3.1.1.15

This SR ensures that the individual channel response times are less than or equal to the maximum values assumed in the accident analysis. The RPS RESPONSE TIME acceptance criteria are included in Reference 22.

RPS RESPONSE TIME may be verified by actual response time measurements in any series of sequential, overlapping, or total channel measurements. However, the sensors for Functions 3 and 4 are excluded from specific RPS RESPONSE TIME measurement since the conditions of Reference 19 are satisfied. For Functions 3 and 4, sensor response time may be allocated based on either assumed design sensor response time or the manufacturer's stated design response time. For all other Functions, sensor response time must be measured.

Note 1 excludes neutron detectors from RPS RESPONSE TIME testing because the principles of detector operation virtually ensure an instantaneous response time.

RPS RESPONSE TIME tests are conducted on a 24 month STAGGERED TEST BASIS. Note 2 requires STAGGERED TEST BASIS Frequency to be determined based on 2 channels. This ensures all required channels are tested during two Surveillance Frequency intervals. For Functions 2.b, 2.c, 3, 4, 6, and 9, two channels must be tested during each test; while for Functions 5 and 8, eight and four channels

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.1.15 (continued)

must be tested. This Frequency is based on the logic interrelationships of the various channels required to produce an RPS scram signal. The 24 month Frequency is consistent with the refueling cycle and is based upon plant operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

REFERENCES

1. UFSAR, Section 7.2.
2. UFSAR, Section 14.5.4.2.
3. NEDO-23842, Continuous Control Rod Withdrawal Transient In The Startup Range, April 18, 1978.
4. 10 CFR 50.36(c)(2)(ii).
5. NEDO-31960-A, BWR Owners' Group Long Term Stability Solutions Licensing Methodology, June 1991.
6. NEDO-31960-A, Supplement 1, BWR Owners' Group Long Term Stability Solutions Licensing Methodology, Supplement 1, March 1992.
7. UFSAR, Section 14.5.1.2.
8. UFSAR, Section 14.6.1.2.
9. UFSAR, Section 14.5.2.1.
10. UFSAR, Section 14.5.2.2.
11. UFSAR, Section 6.3.
12. Drawing 11825-5.01-15D, Rev. D, Reactor Assembly Nuclear Boiler, (GE Drawing 919D690BD).
13. UFSAR, Section 14.5.5.1.
14. UFSAR, Section 14.5.2.3.
15. UFSAR, Section 14.6.1.5.

(continued)

BASES

REFERENCES (continued)

16. P. Check (NRC) letter to G. Lainas (NRC), BWR Scram Discharge System Safety Evaluation, December 1, 1980.

17. UFSAR, Section 14.5.9.

18. NEDC-30851P-A, Technical Specification Improvement Analyses for BWR Reactor Protection System, March 1988.

19. NEDO-32291-A System Analyses For the Elimination of Selected Response Time Testing Requirements, October 1995.

20. NRC letter dated October 28, 1996, Issuance of Amendment 235 to Facility Operating License DPR-59 for James A. FitzPatrick Nuclear Power Plant.

21. NRC Bulletin 90-01, Supplement 1, Loss of Fill-Oil in Transmitters Manufactured by Rosemount, December 1992.

22. UFSAR, Table 7.2-5.

Specification 3.3.2.1

TABLE ~~4.2.3~~

CONTROL ROD BLOCK INSTRUMENTATION
~~TEST AND CALIBRATION REQUIREMENTS~~

A1

	Instrument Channel	Instrument Functional Test (Note 5)	Calibration	Instrument Check (Note 4)
1)	APRM - Downscale	Q	Q	D
2)	APRM - Upscale	Q	Q	D
3)	IRM - Upscale	S/U (Note 2)	Q (Notes 3 & 6)	D
4)	IRM - Downscale	S/U (Note 2)	Q (Notes 3 & 6)	D
5)	IRM - Detector Not in Startup Position	S/U (Note 2)	NA	NA
6)	RBM - Upscale	Q / Q	SR 3.3.2.1.5 Q	D / D
7)	RBM - Downscale	Q	SR 3.3.2.1.5 Q	D
8)	SRM - Upscale	S/U (Note 2)	Q (Notes 3 & 6)	D
9)	SRM - Detector Not in Startup Position	S/U (Note 2)	NA	NA
10)	Scram Discharge Instrument Volume - High Water Level (Group B Instruments)	Q	Q	D

A4

R1

L5

M4

L2

K

add Note 1 to SR 3.3.2.1.5

add SR 3.3.2.1.4 for Upscale

[1.a] [1.c]

add Note 2 to SR 3.3.2.1.5 and add SR 3.3.2.1.8 for Upscale Flow signal CHANNEL CALIBRATION

K

R1

NOTE: ~~See notes following Table 4.2.5.~~

M1

add SR 3.3.2.1.1 for Function 1.b

A2

add Function 2 "Rod Worth Minimizer" surveillances

A7

add SR 3.3.2.1.7 for RWS - Shutdown Position

M2

Specification 3.3.2.1

A1

[Applicability]

3.3.B (cont'd)

[ECO 3.3.2.1]
[Table 3.3.2.1-1 Function 2]

3. Whenever the reactor is below 10% rated thermal power, the Rod Worth Minimizer (RWM) shall be operable except as follows:

[RA C.2.1.1]
[RA C.2.2]
[ACTION D]

a. Should the RWM become inoperable during a reactor startup after the first twelve control rods have been withdrawn, or during a reactor shutdown, control rod movement may continue provided that a second licensed reactor operator, licensed senior operator, or reactor engineer independently verifies that the control rods are being positioned in accordance with the RWM program sequence.

LA6

other qualified member of the technical staff

[Required Action C.2.1.2]
[RA C.2.2]

b. Should the RWM be inoperable before a startup is begun, or become inoperable during the withdrawal of the first twelve control rods, the startup may continue provided that a reactor engineer independently verifies that the control rods are being positioned in accordance with the RWM program sequence. After twelve control rods have been fully withdrawn, startup may continue in accordance with Specification 3.3.B.3.a above.

4.3.B (cont'd)

L4

3. The capability of the Rod Worth Minimizer to properly fulfill its function shall be demonstrated by the following checks:

a. During startup, prior to the start of control rod withdrawal:

L4

[SR 3.3.2.1.9]

(1) The correctness of the RWM program sequence shall be verified.

(2) The RWM computer on line diagnostic test shall be successfully performed.

(3) Proper annunciation of the selection error of at least one out-of-sequence control rod in each fully inserted group shall be demonstrated.

LA2

L3

add SR 3.3.2.1.2 Note

[SR 3.3.2.1.2]

(4) The rod block function of the RWM shall be demonstrated by withdrawing an out-of-sequence control rod no more than to the block point, then reinserting the subject rod.

LA3

every 92 days

L3

K

L4

b. During shutdown, prior to attaining 10% rated power during rod insertion, except by scram:

L4

[SR 3.3.2.1.9]

(1) The correctness of the RWM program sequence shall be verified.

(2) The RWM computer on line diagnostic test shall be successfully performed.

LA2

K

M5

add SR 3.3.2.1.3

M6

add proposed SR 3.3.2.1.6

DISCUSSION OF CHANGES
ITS: 3.3.2.1 - CONTROL ROD BLOCK INSTRUMENTATION

ADMINISTRATIVE CHANGES

A1 In the conversion of the James A. FitzPatrick Nuclear Power Plant (JAFNPP) Current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS) certain wording preferences or conventions are adopted that do not result in technical changes. Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the conventions in NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4", Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).

A2 The requirements of the Rod Worth Minimizer (RWM) have been added to CTS Tables 3.2-3 and 4.2-3 (ITS Table 3.3.2.1-1 Function 2). This addition is considered administrative since the requirement concerning RWM OPERABILITY are contained in CTS 3.3.B.3. This change is consistent with NUREG-1433, Revision 1.

A3 Not Used.

A4 CTS Table 4.2-3 requires both an instrument functional test and calibration to be performed on a quarterly basis for both the RBM-Upscale (CTS Table 4.2-3 Function 6) and RBM-Downscale (Function 7) Functions. In the ITS, SR 3.3.2.1.5 requires the performance of a CHANNEL CALIBRATION. It is not necessary to specify a CHANNEL FUNCTIONAL TEST since the ITS definition of CHANNEL CALIBRATION includes all the requirements of a CHANNEL FUNCTIONAL TEST. Therefore, the explicit instrument functional test is not included in the ITS. This change is considered administrative since the CHANNEL CALIBRATION is performed on a quarterly basis and fulfills all the requirements of a CHANNEL FUNCTIONAL TEST. Along with this change, Table 4.2-1 through 4.2-5 Note 5 which is associated with the channel function test (This instrument is exempt...) is deleted from the CTS since the CHANNEL FUNCTIONAL TEST is not required to be performed. The details of this Note are included in the ITS definition of CHANNEL FUNCTIONAL, therefore its removal is also considered administrative.

A5 CTS Table 4.2-1 through 4.2.5 Note 4 states that instrument checks are not required when these instruments are not required to be operable or are tripped. This explicit requirement is not retained in ITS 3.3.2.1. This explicit Note is not needed in ITS 3.3.2.1 since these allowances are included in ITS SR 3.0.1. SR 3.0.1 states that SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. In addition, the Note states that Surveillances do not have to be performed on inoperable equipment or variables outside specified limits. When equipment is declared inoperable, the Actions of this LCO require the equipment to be placed in the trip condition. In this condition, the equipment is still

ADMINISTRATIVE CHANGES

A5 (continued)

inoperable but has accomplished the required safety function. Therefore the allowances in SR 3.0.1 and the associated actions provide adequate guidance with respect to when the associated surveillances are required to be performed and this explicit requirement is not retained.

A6 CTS 3.2.D and 4.2.D provide a cross reference to the Radiological Effluent Technical Specification (Appendix B) for those Radiation Monitoring Systems which provide an Isolation and Initiation Function. Since CTS 3.2.D and 4.2.D do not prescribe any specific requirements and since the changes to the current requirements in Appendix B are discussed in the Discussion of Changes within this submittal, this cross reference has been deleted. This change is considered administrative since it simply eliminates a cross-reference. This change is consistent with NUREG-1433, Revision 1.

A7 The proposed change adds ITS SR 3.3.2.1.8 for CHANNEL CALIBRATION of the recirculation loop flow signal portion of the RBM - Upscale Function (which is flow biased). CTS Table 4.2-3 does not contain a specific surveillance requirement for calibration of the recirculation loop flow signal. The recirculation loop flow signal provided to the RBM-Upscale control rod block Function is the same signal provided to the APRM Neutron Flux-High (Flow Biased) Function (ITS Table 3.3.1.1-1, Function 2.b, CTS Table 3.3-1, Item (5), and CTS Table 4.1-2, Item (4)). The proposed change also adds Note 2 to ITS SR 3.3.2.1.5 to provide clarification that the CHANNEL CALIBRATION required by ITS SR 3.3.2.1.5 excludes the recirculation loop flow signal portion of the channel for Function 1.a while the Note in proposed ITS SR 3.3.2.1.8 excludes all portions of the channel except the recirculation loop flow signal. Since this change does not change any current requirements, it is considered administrative. K

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 An additional Function has been added to CTS Table 3.2-3 for the Rod Block Monitor. ITS Table 3.3.2.1-1 Function 1.b (Rod Block Monitor-Inop) will require the "Inop" function to be Operable consistent with the Applicability with the other Rod Block Monitor Functions. This change is more restrictive but necessary to ensure a rod block is provided if the minimum number of LPRMs inputs are not available to the associated Rod Block Monitor channel. A channel functional test (i.e., SR 3.3.2.1.1) is also proposed for the Rod Block Monitor Inop function. The performance of this SR for each RBM channel will ensure that the

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 (continued)

entire channel will perform its intended function when it is required to be Operable. The proposed surveillance frequency of 92 days for SR 3.3.2.1.1 is based on the reliability analysis provided in NEDC-30851-P-A (see revised DOC L3 for the bases for concluding that this topical report is acceptable for use at the JAFNPP). Accordingly, the addition of the Rod Block Monitor - Inop function, its associated channel functional test SR and the 92 day surveillance interval will help to ensure that the local flux is adequately monitored during control rod withdrawal by promptly identifying to the operator the inoperability of the Rod Block Monitor as a consequence of certain component failures.

M2 An additional Function has been added to CTS Table 3.2-3. ITS 3.3.2.1, Control Rod Block Instrumentation, will include the Control Rod Block Function of the Reactor Mode Switch as a required function (Function 3 on proposed Table 3.3.2.1-1). The new requirement is that 2 channels of the Rod Block function of Reactor Mode Switch–Shutdown Position must be Operable whenever the Mode Switch is in the Shutdown position. This addition to the Specification for the Control Rod Block Instrumentation will include proposed SR 3.3.2.1.7 (CHANNEL FUNCTIONAL TEST every 24 months) and proposed LCO 3.3.2.1, Condition E (Required Actions and Completion Times if this function is inoperable). ITS SR 3.3.2.1.7 will not be required to be performed until 1 hour after the Reactor Mode Switch is placed in Shutdown. This rod block ensures that control rods are not withdrawn in MODES 3 and 4, since control rods are assumed to be inserted. This change is consistent with NUREG-1433, Revision 1.

M3 The out of service time in CTS Table 3.2-3 Note 2 Action B.a) has been reduced from 7 days to 24 hours (ITS 3.3.2.1 Required Action A.1) when one RBM channel is inoperable. The 24 hour Completion Time is acceptable, based on a low probability of an event occurring coincident with a failure in the remaining channel. This change is more restrictive since less time is permitted but consistent with NUREG-1433, Revision 1.

M4 SR 3.3.2.1.4 has been 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. This change is more restrictive since a periodic surveillance has been included. This will ensure the RBM is Operable when required to limit the consequences of a single control rod withdrawal error event during power operation.

DISCUSSION OF CHANGES
ITS: 3.3.2.1 - CONTROL ROD BLOCK INSTRUMENTATION

TECHNICAL CHANGES - MORE RESTRICTIVE

M5 A new CHANNEL FUNCTIONAL TEST (ITS SR 3.3.2.1.3) surveillance is proposed to be added similar to CTS 4.3.B.3.a.4 in MODE 1 when Thermal Power is ≤ 10% to ensure the RWM is Operable with the reactor mode switch in RUN. The test is required every 92 days and is consistent with NEDC-30851-P-A, "Technical Specification Improvement Analysis for BWR Control Rod Block Instrumentation," October 1988.

M6 A new SR is proposed to be added to the surveillances of CTS 4.3.B.3. SR 3.3.2.1.6 will verify every 24 months that the Rod Worth Minimizer (RWM) is not bypassed when Thermal Power is ≤ 10%. The RWM may be bypassed when power is above 10%. However, the existing specifications (CTS 4.3.B.3) do not have an explicit requirement to verify the setpoint of the RWM bypass feature. This change represents an additional restriction on plant operations necessary to ensure the RWM Function is Operable when required.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA1 The specific details in the "Total Number of Instrument Channels Provided By Design" column of CTS Table 3.2-3 are proposed to be relocated to the Bases. Placing these details in the Bases provides assurance they will be maintained. The requirements of ITS 3.3.2.1 which require the Control Rod Block Instrumentation to be OPERABLE, the definition of OPERABILITY, and the proposed Required Action and surveillances suffice. As such, these details are not required to be in the ITS to provide adequate protection of public health and safety. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS.

LA2 The requirements of CTS 4.3.B.3.a.2, 3 and CTS 4.3.B.3.b.2 are proposed to be relocated to the Technical Requirements Manual. The RWM computer on line diagnostic test in CTS 4.3.B.3.a.2 and CTS 4.3.B.3.b.2 and the proper annunciation of the selection error in CTS 4.3.B.3.a.3 are not required to ensure the rod block function is properly working. ITS SRs 3.3.2.1.2 and 3.3.2.1.3 demonstrate the proper operation of the rod block function. Therefore, these tests do not need to be included in the ITS to ensure RWM remains Operable. The requirements of the LCO and the associated RWM surveillances and the definition of OPERABILITY suffice. As such, these details are not required to be in the ITS to provide adequate protection of public health and safety. Changes to the relocated requirements in the TRM will be controlled by the provisions of 10 CFR 50.59.

DISCUSSION OF CHANGES
ITS: 3.3.2.1 - CONTROL ROD BLOCK INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA3 The details in CTS 4.3.B.3.a.4 related to the performance of the Rod Worth Minimizer (RWM) Channel Functional Test is proposed to be relocated to the Bases. These testing details do not need to be included in the Specifications to ensure the RWM remains Operable. The requirements of ITS 3.3.2.1 which require the RWM to be Operable and the definition of OPERABILITY suffices. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS.

LA4 Not Used.

LA5 The detail in CTS Table 3.2-3 that the Rod Block Monitor is Flow-Biased is proposed to be relocated to the Bases. The requirement in ITS LCO 3.3.2.1 that the control rod block instrumentation for each Function in Table 3.3.2.1-1 shall be OPERABLE and the specific requirement in ITS Table 3.3.2.1-1 (Function 1.a) for the Rod Block Monitor-Upscale Function is sufficient to ensure the instrumentation remains OPERABLE. The Bases describes the design of the instrumentation channel. As such, these details are not required to be in the ITS to provide adequate protection of public health and safety. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS.

LA6 The requirement in CTS 3.3.B.3.a and CTS 3.3.B.3.c that the second individual be a "reactor" or "senior" operator or a "reactor engineer" is proposed to be relocated to the Bases. In addition, the requirement in CTS 3.3.B.3.c that the individuals shall have no other concurrent duties during rod withdrawal or insertion (when the rod worth minimizer is inoperable and a control rod is being moved) is also proposed to be relocated to the Bases. If the rod worth minimizer is inoperable during a reactor startup, ITS 3.3.2.1 Required Actions C.2.2 and D.1 require the verification of movement of control rods is in compliance with bank position withdrawal sequence (BPWS) by a second licensed operator or by another qualified member of the technical staff during control rod movement. The Bases identifies these individuals and, for Required Action C.2.2 only, states that these individuals shall have no other concurrent duties. As such, these details are not required to be in the ITS to provide adequate protection of public health and safety. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS.

DISCUSSION OF CHANGES
ITS: 3.3.2.1 - CONTROL ROD BLOCK INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 The requirements in Table 3.2-3 (Note 2, Action B), and CTS 3.3.B.5 concerning operations on a limiting control rod pattern have been deleted. Since a limiting control rod pattern is defined as operating on a power distribution limit (such as APLHGR or MCPR), the condition is extremely unlikely. The status of power distribution limits does not affect the OPERABILITY of the RBM and therefore, no additional requirements on the RBM System are required (e.g., that it be tripped immediately with a channel inoperable while on a limiting control rod pattern). Adequate requirements on power distribution limits are specified in the LCOs in ITS Section 3.2. Furthermore, due to the improbability of operating on or above a limiting control rod pattern, the ACTIONS would almost never be required. Therefore, the current Actions in Table 3.2-3 Action B as modified by M3 are acceptable for all inoperabilities of the RBM and are included as ITS 3.3.2.1 ACTIONS and B.

L2 CTS 4.2.C (Table 4.2-3) requires an Instrument Check (Channel Check) of the RBM Upscale and Downscale once per day. ITS 3.3.2.1 does not require a Channel Check of these Functions. The RBM automatically re-nulls itself whenever a control rod is selected and retains the latest setting until another control rod is selected, making the performance of a Channel Check during static conditions (i.e., a daily channel check) of no safety benefit. Specifically, at the time a control rod is selected for movement, the RBM automaticallly readjusts its input and output readings (different LPRM inputs associated with the rod selected and re-normalization), i.e., "renulling." At this time, the operator is in direct observation and monitoring of the control rod movement and RBM response; in essence, performing a continuous instrument check during the time the RBM is performing its safety function (i.e., during control rod withdrawal). Therefore, a routine daily check of the RBMs during static conditions, prior to the renulling that occurs when a control rod is selected for movement, adds no assurance of safety. Accordingly, the elimination of a formal Channel Check for this instrument is acceptable.

L3 CTS 4.3.B.3.a.4 requires a demonstration of the rod block function during startup, prior to the start of control rod withdrawal. ITS 3.3.2.1 will require a CHANNEL FUNCTIONAL TEST of the RWM every 92 days in MODE 2 (SR 3.3.2.1.2). ITS SR 3.3.2.1.2 will be modified by a Note stating that the CHANNEL FUNCTIONAL TEST is not required during a startup until 1 hour after any control rod is withdrawn at $\leq$ 10% RTP in MODE 2. The addition of this Note and the change in Frequency to 92 days makes the proposed requirement for a CHANNEL FUNCTIONAL TEST less restrictive because the Surveillance Test is not required until 1 hour after the RWM is required to be Operable, and the test is not required

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L3 (continued)

to be performed at startup if performed in the previous 92 days. In addition, a CHANNEL FUNCTIONAL TEST will be required in MODE 1 in accordance with SR 3.3.2.1.3, but not until 1 hour after Thermal Power is ≤ 10% RTP (see M5). The Rod Worth Minimizer does not monitor core thermal conditions but simply enforces preprogrammed rod patterns as a backup intended to prevent reactor operator error in selecting or positioning control rods. The RWM is a reliable system, as shown by both a review of maintenance history and by successful completion of previous startup surveillances. As a result, the effect on safety due to the extended Surveillance is small. Also, the increased testing prior to each startup increases the wear on the instruments, thereby reducing overall reliability. Therefore, an additional Surveillance other than the quarterly Surveillance is not needed to assure the instruments will perform their associated safety function. In addition, other similar rod block functions have a 92 day CHANNEL FUNCTIONAL TEST.

The Note changes are acceptable since the only way the required Surveillances can be performed prior to entry in the specified condition is by utilizing jumpers or lifted leads. Use of these devices is not recommended since minor errors in their use may significantly increase the probability of a reactor ransient or event which is a precursor to a previously analyzed accident. Therefore, time is allowed to conduct the Surveillances after entering the specified condition.

L4 The Frequency in CTS 4.3.B.3.a and CTS 4.3.B.3.b to verify the correctness of the RWM program sequence during startup, prior to the start of control rod withdrawal and during shutdown prior to attaining 10% rated power during rod insertion has been changed to require the verification only prior to declaring RWM OPERABLE following loading of the Sequence into RWM. This change is acceptable since this is when rod sequence input errors are possible. This change is consistent with NUREG-1433, Revision 1.

L5 The proposed change adds Note 1 to the quarterly CHANNEL CALIBRATION Surveillance Requirement in CTS Table 4.2-3 for the RBM Upscale and Downscale Functions (SR 3.3.2.1.5) excluding the neutron detectors from the Surveillance. The CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. The test verifies that the channel responds to the measured parameter within the necessary range and accuracy. The neutron detectors are excluded from the CHANNEL CALIBRATIONS because they are passive devices with minimal drift, and because of the difficulty of simulating a meaningful signal. Changes in

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 (continued)

neutron detector sensitivity are compensated for by performance of the 7 day calorimetric calibration (SR 3.3.1.1.2) and the 1000 MWD/T LPRM calibration against the TIPs (SR 3.3.1.1.7). The change is consistent with NUREG-1433, Revision 1.

L6 CTS 4.3.B.5 requires the performance of a functional test on a RBM when a limiting control rod pattern exists prior to the withdrawal of the designated rod(s). This testing requirement is proposed to be deleted from the current Technical Specifications. Operation with a limiting control rod pattern is analogous to operating on a power distribution limit, such as APLHGR or MCPR. There is no correlation between power distribution limits and its affect on the operability of the RBM. Therefore, initiation of surveillance testing of the RBM based on the status of power distribution limits does not increase the likelihood of identifying an inoperable RBM. In fact, since operating on a limiting control rod pattern is extremely unlikely, this surveillance requirement would most likely never be performed. Furthermore, an analysis of the operating experience associated with the performance of RBM instrument functional testing and calibration testing (CTS Table 4.2-3) demonstrates that these surveillance tests, which are performed at a 92 day interval, are indicative of a very high degree of reliability for a RBM instrument channel. These testing requirements and their associated test intervals (i.e., functional/calibration testing at 92 day intervals) are maintained in the ITS by SR 3.3.2.1.5. As discussed in the DOC A4, calibration testing includes all the requirements of a channel functional test. Accordingly, based on the above evaluation, the Licensee has concluded that the deletion of this CTS testing requirement would have an insignificant affect on nuclear safety. This change is consistent with NUREG-1433, Revision 1.

L7 CTS Table 3.2-3 requires the RBM to be Operable when reactor power is greater than or equal to 30%. In the ITS, this requirement is maintained in Table 3.3.2.1-1 Footnote (a) except when a peripheral control rod is selected. This change is acceptable since with a peripheral rod selected the consequences of a control rod withdrawal error event will not exceed the MCPR SL. In addition, this change is consistent with the design of the RBM circuitry. That is when a peripheral control rod is selected the RBM is automatically bypassed and the output set to zero.

DISCUSSION OF CHANGES
ITS: 3.3.2.1 - CONTROL ROD BLOCK INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L8 The requirement in CTS 3.3.B.3.d to prepare and submit a report to the NRC within 30 days of a plant startup without the RWM Operable is proposed to be deleted from the Technical Specifications. This special report states the reason for the RWM inoperability, the action taken to restore it, and the schedule for returning the RWM to an operable status. This special report provides a mechanism to review the appropriateness of licensee activities after-the-fact, but provides no regulatory authority once the report is submitted (i.e., no requirement for NRC approval). The Quality Assurance requirements of 10 CFR 50, Appendix B, provide assurance that appropriate corrective actions will be taken. Given that the report was required to be provided to the Commission within 30 days following the startup, report completion and submittal was clearly not necessary to assure operation of the facility in a safe manner for the interval between startup of the unit and submittal of the report. Accordingly, based on the above evaluation, the RWM Special Report is not required to be in the current Technical Specifications nor the ITS. This change is consistent with NUREG-1433.

TECHNICAL CHANGES - RELOCATIONS

R1 CTS 2.1.A.1.d, Tables 3.2-3 and 4.2-3 and the Notes to these Tables include the Safety Limits, LCOs and SRs for Rod Block functions associated with the APRMs, IRMs, SRMs, and Scram Discharge Volume Level. These requirements are being relocated to the Technical Requirements Manual (TRM). The APRM, IRM, SRM, and Scram Discharge Volume (SDV) rod blocks are intended to prevent control rod withdrawal when plant conditions make such withdrawal imprudent. However, there are no safety analyses that depend upon these rod blocks to prevent, mitigate or establish initial conditions for design basis accidents or transients. The evaluation summarized in NEDO-31466 determined that the loss of the APRM, IRM, SRM, and Scram Discharge Volume rod blocks would be a non-significant risk contributor to core damage frequency and offsite releases. The results of this evaluation have been determined to be applicable to JAFNPP. Therefore, this instrumentation does not satisfy 10 CFR 50.36(c)(2)(ii) for inclusion in the Technical Specifications as documented in the Application of Selection Criteria to the JAFNPP Technical Specifications. The TRM will be incorporated by reference into the UFSAR at ITS implementation. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.3.2.1.7 [M2] DB4 NOTE Not required to be performed until 1 hour after reactor mode switch is in the shutdown position. Perform CHANNEL FUNCTIONAL TEST.	24 months DB7
move to previous page SR 3.3.2.1.5 S CLB1 NOTE Neutron detectors are excluded. 1. Perform CHANNEL CALIBRATION. [L5] [Table 4.2-3 Function 6 and 7]	92 days 18 months K
SR 3.3.2.1.8 9 DB4 Verify control rod sequences input to the RWM are in conformance with BPWS. [4.3.B.3.a.1] [4.3.B.3.b.1] [L4]	Prior to declaring RWM OPERABLE following loading of sequence into RWM DB4
CLB1 2. For Function 1.a, the recirculation loop flow signal portion of the channel is excluded.	K
CLB1 SR 3.3.2.1.8 NOTE For Function 1.a, all portions of the channel except the recirculation loop flow signal portion are excluded Perform CHANNEL CALIBRATION	24 months K

Revision K

Table 3.3.2.1-1 (page 1 of 1)
Control Rod Block Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Rod Block Monitor				
a. ~~Low Power Range~~ Upscale	(a)	[2]	~~SR 3.3.2.1.1~~ SR 3.3.2.1.4 SR 3.3.2.1.6	≤ [115.5/125] divisions of full scale
b. Intermediate Power Range – Upscale	(b)	[2]	SR 3.3.2.1.1 SR 3.3.2.1.4 SR 3.3.2.1.7	≤ [109.7/125] divisions of full scale
c. High Power Range – Upscale	(c), (d)	[2]	SR 3.3.2.1.1 SR 3.3.2.1.4 SR 3.3.2.1.7	≤ [108.9/125] divisions of full scale
e. Inop	(d), (e)	[2]	SR 3.3.2.1.1	NA
g. Downscale	(d), (e)	[2]	~~SR 3.3.2.1.1~~ SR 3.3.2.1.6	≥ [2.5/125] divisions of full scale
f. Bypass Time Delay	(d), (e)	[2]	SR 3.3.2.1.1 SR 3.3.2.1.7	≤ [2.0] seconds
2. Rod Worth Minimizer	1(b), 2(b)	[1]	SR 3.3.2.1.2 SR 3.3.2.1.3 SR 3.3.2.1.5 SR 3.3.2.1.8	NA
3. Reactor Mode Switch – Shutdown Position	(c)	[2]	SR 3.3.2.1.6	NA

(a) THERMAL POWER ≥ ~~[29]%~~ 30% and ≤ [84]% RTP and MCPR < 1.70.
(b) THERMAL POWER > [64]% and ≤ [84]% RTP and MCPR < 1.70.
(c) THERMAL POWER > [84]% and < 90% RTP and MCPR < 1.70.
(d) THERMAL POWER ≥ 90% RTP and MCPR < 1.40.
(e) THERMAL POWER ≥ [64]% and < 90% RTP and MCPR < 1.70.
(b) With THERMAL POWER ≤ [10]% RTP.
(c) Reactor mode switch in the shutdown position.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.3.2.1 - CONTROL ROD BLOCK INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 ITS SR 3.3.2.1.5, the 92 day RBM Channel Calibration Surveillance, is modified by the addition of Note 2 that excludes the recirculation loop flow signal portion of the channel. CTS Table 4.1-2, "Flow Bias Signal," requires an "internal power and flow test with standard pressure source" calibration on a refueling interval. This flow bias signal provides input to both the APRM Neutron Flux-High (Flow Biased) RPS scram Function and to the RBM-Upscale control rod block Function. CTS 3/4.2.C does not have a specific flow bias signal line item, thus the calibration required by CTS Table 4.1-2 covers the RBM requirements, as well as the RPS requirements, of the recirculation loop flow signal. Therefore, the RBM Channel Calibration requirement in SR 3.3.2.1.5 is modified to exclude the recirculation loop flow signal portion of the channel. ITS SR 3.3.2.1.8 requires calibration of the recirculation loop flow signal portion of the channel and the Bases notes that performance of ITS SR 3.3.2.1.8 also satisfies ITS SR 3.3.1.1.12. (K) (K) (K) (K)

CLB2 The Allowable Value of the RBM upscale is located in the COLR. This was accepted in JAFNPP Technical Specification Amendment No.162. This allowance is consistent with the guidance in Generic Letter 88-16 for the removal of cycle-specific parameter limits from the Technical Specifications to the COLR.

CLB3 The CTS allows only one startup with the RWM inoperable (i.e., inoperable prior to withdrawal of the first 12 control rods) per calendar year. The words in ISTS Required Action C.2.1.2, "performed in the last calendar year" could allow multiple startups with the RWM inoperable in the current calendar year, since the check only looks at the last (i.e., previous) calendar year. Therefore, consistent with the current licensing basis, the word "last" has been changed to "current."

PLANT-SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 None

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The RWM is required to be Operable at $\leq$ 10% RTP as specified in CTS 4.3.B.3.a.4. This requirement is consistent with the design bases analysis assumptions. Therefore, the bracketed value of 10% has been retained in the ITS throughout the Specification.

DB2 The brackets have been removed and the Surveillance Frequency of 92 days is retained in ITS SR 3.3.2.1.2 and SR 3.3.2.1.3. This Frequency is

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.3.2.1 - CONTROL ROD BLOCK INSTRUMENTATION

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB3 ITS SR 3.3.2.1.4 has been added in accordance with M4. The bracketed Frequency of 18 months has been changed to 92 days and the bracketed Surveillance Note (Neutron detectors are excluded) retained. The surveillance has been re-written to conform to the JAFNPP plant design. The Surveillance ensures the RBM is Operable when required.

DB4 ISTS SR 3.3.2.1.7, (Channel Calibration of RBM Upscale control rod block Function (except for the recirculation loop from signal portion of the channel) and RBM Downscale control rod block Function channels) is currently performed every 92 days therefore the surveillance has been placed in its appropriate location and renumbered as SR 3.3.2.1.5. Subsequent surveillances have been renumbered, where applicable. This Surveillance Frequency is consistent with methodology in determining the associated Allowable Values for these Functions. Since the Calibration is performed every 92 days there is no need for a CHANNEL FUNCTIONAL TEST, therefore SR 3.3.2.1.1 has been removed from these Functions in the Table.

DB5 SR 3.3.2.1.1, a CHANNEL FUNCTIONAL TEST, has been added in accordance with M1 for the RBM Inop function. The bracketed Frequency of 92 days is retained since it is consistent with NEDC-30851-P-A.

DB6 The bracketed Surveillance Frequency of ITS SR 3.3.2.1.6 is changed from 18 months to 24 months as justified in the associated Bases for this surveillance. The trip setpoint methodology assumes a Frequency of 24 months between calibrations.

DB7 The bracketed Surveillance Frequency of ITS SR 3.3.2.1.7 has been changed from 18 to 24 months since the test should be performed during a plant outage to minimize any unplanned transients as described in the Bases for this SR.

DB8 The brackets have been removed and the proper number of channels included for each Function in Table 3.3.2.1-1. The values are consistent with the current requirements in CTS Table 3.2.3 for Functions 1.a, 1.c, and CTS 3.3.B.3 for the Rod Worth Minimizer. The requirements for Function 1.b (RBM-Inop) and Function 3 (Reactor Mode Switch-Shutdown) have been added in accordance with M1 and M2. The specified number of channels are consistent with the plant design.

DB9 Table 3.3.2.1-1 Functions 1.b, 1.c and 1.f are not applicable to JAFNPP. Therefore these Functions have been removed from the Table. Subsequent Functions have been renumbered, where applicable.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.1.6 (continued) and SR 3.3.2.1.8

adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

As noted, neutron detectors are excluded from the CHANNEL CALIBRATION because they are passive devices, with minimal drift, and because of the difficulty of simulating a meaningful signal. Neutron detectors are adequately tested in SR 3.3.1.1.2 and SR 3.3.1.1.8.

The Frequency is based upon the assumption of a 18 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

SR 3.3.2.1.9

The RWM will only enforce the proper control rod sequence if the rod sequence is properly input into the RWM computer. This SR ensures that the proper sequence is loaded into the RWM so that it can perform its intended function. The Surveillance is performed once prior to declaring RWM OPERABLE following loading of sequence into RWM, since this is when rod sequence input errors are possible.

REFERENCES

1. UFSAR, Section 7.6.2.2.3.
2. UFSAR, Section 7.6.8.2.6.
3. NEDC-30474-P, "Average Power Range Monitor, Rod Block Monitor, and Technical Specification Improvements (ARTS) Program for Edwin I. Hatch Nuclear Plants," December 1983.
4. NEDE-24011-P-A-9-US, "General Electrical Standard Application for Reload Fuel," Supplement for United States, Section S 2.2.3.1, September 1988.
5. UFSAR, Section 14.6.1.2
6. "Modifications to the Requirements for Control Rod Drop Accident Mitigating Systems," BWR Owners' Group, July 1986.
7. Letter from T. A. Pickens (BWROG) to G. C. Lainas (NRC), Amendment 17 to General Electric Licensing Topical Report NEDE-24011-P-A, BWROG-8644, August 15, 1986.

(continued)

INSERT SR-1

INSERT SR-2

INSERT SR-3

INSERT SR-4

Move to page B 3.3-52

Insert from next page

3. NEDE-24011-P-A Standard General Electric Application for Reactor Fuel, supplement for United States, Section 5.2.2.1.5, (Revision specified in the COLR), 4 10 CFR 50.36(c)(2)(ii)

X1 renumbering

Revision K

PA4

INSERT SR-1

SR 3.3.2.1.5 is modified by two Notes. Note 1 to SR 3.3.2.1.5 excludes

PA4

INSERT SR-2

Note 2 to SR 3.3.2.1.5 excludes the recirculation loop flow signal portion of the channel from the CHANNEL CALIBRATION, since this portion of the channel is calibrated by SR 3.3.2.1.8.

K

PA4

INSERT SR-3

SR 3.3.2.1.8 is modified by a Note that excludes all portions of channel except the recirculation loop flow signal from CHANNEL CALIBRATION. SR 3.3.2.1.5, in conjunction with SR 3.3.2.1.8, results in calibration of the entire channel. Since the recirculation loop flow signal is also a portion of the APRM Neutron Flux-High (Flow Biased) RPS scram Function channels (Table 3.3.1.1-1, RPS Instrumentation, Function 2.b), satisfactory performance of SR 3.3.2.1.8 also results in satisfactory completion of SR 3.3.1.1.12 for the associated APRM Neutron Flux-High (Flow Biased) RPS scram Function channels.

PA4

INSERT SR-4

The Frequency of SR 3.3.2.1.8 is based upon the assumption of a 24 month calibration interval in the determination of the magnitude of the equipment drift in the setpoint analysis.

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.3.2.1.2	----------NOTE---------- Not required to be performed until 1 hour after any control rod is withdrawn at ≤ 10% RTP in MODE 2. ---------- Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.2.1.3	----------NOTE---------- Not required to be performed until 1 hour after THERMAL POWER is ≤ 10% RTP in MODE 1. ---------- Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.2.1.4	----------NOTE---------- Neutron detectors are excluded. ---------- Verify the RBM is not bypassed: a. When THERMAL POWER is ≥ 30% RTP; and b. When a peripheral control rod is not selected.	92 days
SR 3.3.2.1.5	----------NOTES---------- 1. Neutron detectors are excluded. 2. For Function 1.a, the recirculation loop flow signal portion of the channel is excluded. ---------- Perform CHANNEL CALIBRATION.	92 days

(continued)

K

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.3.2.1.6	Verify the RWM is not bypassed when THERMAL POWER is ≤ 10% RTP.	24 months
SR 3.3.2.1.7	----------NOTE---------- Not required to be performed until 1 hour after reactor mode switch is in the shutdown position. ---------- Perform CHANNEL FUNCTIONAL TEST.	24 months
SR 3.3.2.1.8	----------NOTE---------- For Function 1.a, all portions of the channel except the recirculation loop flow signal portion are excluded. ---------- Perform CHANNEL CALIBRATION.	24 months
SR 3.3.2.1.9	Verify control rod sequences input to the RWM are in conformance with BPWS.	Prior to declaring RWM OPERABLE following loading of sequence into RWM

K

K

Table 3.3.2.1-1 (page 1 of 1)
Control Rod Block Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Rod Block Monitor				
a. Upscale	(a)	2	SR 3.3.2.1.4 SR 3.3.2.1.5 SR 3.3.2.1.8	As specified in the COLR
b. Inop	(a)	2	SR 3.3.2.1.1 SR 3.3.2.1.4	NA
c. Downscale	(a)	2	SR 3.3.2.1.4 SR 3.3.2.1.5	≥ 2.5/125 divisions of full scale
2. Rod Worth Minimizer	1[(b)],2[(b)]	1	SR 3.3.2.1.2 SR 3.3.2.1.3 SR 3.3.2.1.6 SR 3.3.2.1.9	NA
3. Reactor Mode Switch – Shutdown Position	(c)	2	SR 3.3.2.1.7	NA

(a) THERMAL POWER ≥ 30% RTP and no peripheral control rod selected.

(b) With THERMAL POWER ≤ 10% RTP.

(c) Reactor mode switch in the shutdown position.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.1.2 and SR 3.3.2.1.3 (continued)

state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with the applicable extensions. The CHANNEL FUNCTIONAL TEST for the RWM is performed by attempting to withdraw a control rod not in compliance with the prescribed sequence and verifying a control rod block occurs. As noted in the SRs, SR 3.3.2.1.2 is not required to be performed until 1 hour after any control rod is withdrawn at ≤ 10% RTP in MODE 2 and, SR 3.3.2.1.3 is not required to be performed until 1 hour after THERMAL POWER is ≤ 10% RTP in MODE 1. This allows entry into MODE 2 for SR 3.3.2.1.2, and entry into MODE 1 when THERMAL POWER is ≤ 10% RTP for SR 3.3.2.1.3, to perform the required Surveillance if the 92 day Frequency is not met per SR 3.0.2. The 1 hour allowance is based on operating experience and in consideration of providing a reasonable time in which to complete the SRs. The 92 day Frequencies are based on reliability analysis (Ref. 9).

SR 3.3.2.1.4

The RBM is automatically bypassed when power is below a specified value or if a peripheral control rod is selected. The power level is determined from the APRM signals input to each RBM channel. The automatic bypass must be verified periodically to be < 30% RTP. In addition, it must also be verified that the RBM is not bypassed when a non-peripheral control rod is selected (only one non-peripheral control rod is required to be verified). If any bypass setpoint is nonconservative, then the affected RBM channel is considered inoperable. Alternatively, the APRM channel can be placed in the conservative condition (i.e., enabling the nonbypass). If placed in this condition, the SR is met and the RBM channel is not considered inoperable. As noted, neutron detectors are excluded from the Surveillance because they are passive devices, with minimal drift, and because of the difficulty of simulating a meaningful signal. Neutron detectors are adequately tested in SR 3.3.1.1.2 and SR 3.3.1.1.7. The 92 day Frequency is based on the actual trip setpoint methodology utilized for these channels.

SR 3.3.2.1.5 and SR 3.3.2.1.8

A CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies the channel responds to the measured parameter within the necessary

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.1.5 and SR 3.3.2.1.8 (continued)

range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

SR 3.3.2.1.5 is modified by two Notes. Note 1 to SR 3.3.2.1.5 excludes neutron detectors from the CHANNEL CALIBRATION because they are passive devices, with minimal drift, and because of the difficulty of simulating a meaningful signal. Neutron detectors are adequately tested in SR 3.3.1.1.2 and SR 3.3.1.1.7. Note 2 to SR 3.3.2.1.5 excludes the recirculation loop flow signal portion of the channel from the CHANNEL CALIBRATION, since this portion of the channel is calibrated by SR 3.3.2.1.8.

SR 3.3.2.1.8 is modified by a Note that excludes all portions of channel except the recirculation loop flow signal from CHANNEL CALIBRATION. SR 3.3.2.1.5, in conjunction with SR 3.3.2.1.8, results in calibration of the entire channel. Since the recirculation loop flow signal is also a portion of the APRM Neutron Flux–High (Flow Biased) RPS scram Function channels (Table 3.3.1.1-1, RPS Instrumentation, Function 2.b), satisfactory performance of SR 3.3.2.1.8 also results in satisfactory completion of SR 3.3.1.1.12 for the associated APRM Neutron Flux–High (Flow Biased) RPS scram Function channels.

The Frequency of SR 3.3.2.1.5 is based upon the assumption of a 92 day calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis. The Frequency of SR 3.3.2.1.8 is based upon the assumption of a 24 month calibration interval in the determination of the magnitude of the equipment drift in the setpoint analysis.

SR 3.3.2.1.6

The RWM is automatically bypassed when power is above a specified value. The power level is determined from steam flow signals compensated for steam pressure. The automatic bypass setpoint must be verified periodically to be $\leq$ 10% RTP. If the RWM low power setpoint is nonconservative, then the RWM is considered inoperable. Alternately, the low power setpoint channel can be placed in the conservative condition (nonbypass). If placed in the nonbypassed condition, the SR is met and the RWM is not considered inoperable. The Frequency is based on the trip setpoint methodology utilized for the low power setpoint channel.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.2.1.7

A CHANNEL FUNCTIONAL TEST is performed for the Reactor Mode Switch-Shutdown Position Function to ensure that the entire channel will perform the intended function. A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with the applicable extensions. The CHANNEL FUNCTIONAL TEST for the Reactor Mode Switch-Shutdown Position Function is performed by attempting to withdraw any control rod with the reactor mode switch in the shutdown position and verifying a control rod block occurs.

As noted in the SR, the Surveillance is not required to be performed until 1 hour after the reactor mode switch is in the shutdown position, since testing of this interlock with the reactor mode switch in any other position cannot be performed without using jumpers, lifted leads, or movable links. This allows entry into MODES 3 and 4 if the 24 month Frequency is not met per SR 3.0.2. The 1 hour allowance is based on operating experience and in consideration of providing a reasonable time in which to complete the SRs.

The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 24 month Frequency.

SR 3.3.2.1.9

| K

The RWM will only enforce the proper control rod sequence if the rod sequence is properly input into the RWM computer. This SR ensures that the proper sequence is loaded into the RWM so that it can perform its intended function. The

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.1.9 (continued)

Surveillance is performed once prior to declaring RWM OPERABLE following loading of sequence into RWM, since this is when rod sequence input errors are possible.

REFERENCES

1. UFSAR, Section 7.5.8.2.
2. UFSAR, Section 7.16.5.3.
3. NEDE-24011-P-A, General Electric Standard Application for Reactor Fuel, Supplement for United States, Section S.2.2.1.5, (Revision specified in the COLR).
4. 10 CFR 50.36(c)(2)(ii).
5. UFSAR, Section 14.6.1.2.
6. NRC SER, Acceptance of Referencing of Licensing Topical Report NEDE-24011-P-A, General Electric Standard Application for Reactor Fuel, Revision 8, Amendment 17, December 27, 1987.
7. Letter from T.A. Pickens (BWROG) to G.C. Lainas (NRC), Amendment 17 to General Electric Licensing Topical Report NEDE-24011-P-A, BWROG-8644, August 15, 1986.
8. GENE-770-06-1-A, Addendum to Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications, December 1992.
9. NEDC-30851P-A, Supplement 1, Technical Specification Improvement Analysis for BWR Control Rod Block Instrumentation, October 1988.

Specification 3.3.4.1

A8

A1

TABLE 3.2-7

ATWS RECIRCULATION PUMP TRIP INSTRUMENTATION REQUIREMENTS

Trip Function	Minimum Number of Operable Instrument Channels Per Trip System (Notes 1 & 2)	Allowable Value (A7)	[SR 3.3.4.1.4] Trip Level Setting	[Applicability] Applicable Modes
Reactor Pressure - High	[LCO 3.3.4.1.b]2		≤ 1156 psig	Run [MODE 1]
Reactor Water Level - Low Low	[LCO 3.3.4.1.a]2		≥ 105.4 in. above TAF (LA1)	Run [MODE 1]

1153 (M2)

TS AMD 273

Specification 3.3.4.1
(A1)

THIS PAGE INTENTIONALLY BLANK

TS AMD 273

DISCUSSION OF CHANGES
ITS SECTION 3.3.4.1: ATWS-RPT INSTRUMENTATION

ADMINISTRATIVE CHANGES

A7 (continued)

for the Determination of Setpoints for Nuclear Safety-Related Instrumentation." This change revises the terminology used in the CTS from "Trip Level Setting" to "Allowable Value". Since the instrumentation will be declared inoperable at the same numerical value, this change is considered administrative. This change is consistent with NUREG-1433, Revision 1.

A8 CTS 3.2.G makes reference to the limiting conditions for operations for the instrumentation that trip(s) the recirculation pumps in CTS Table 3.2-7. CTS 4.2.G requires the Recirculation Pump Trip instrumentation to be functional tested, calibrated and to test the associated logic as indicated in Table 4.2-7. This cross-reference to the Tables has been deleted since ITS 3.3.4.1 does not include a Table. All of the technical requirements of CTS Tables 3.2-7 and 4.2-7 are included in the ITS 3.3.4.1 LCO, Applicability, and Surveillances. Since this change simply deletes this cross-reference, this change is considered administrative. This change is consistent with NUREG-1433, Revision 1.

A9 Not used.

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 CTS Table 4.2-7 requires a daily performance of an ATWS-RPT Channel Check. ITS SR 3.3.4.1 will require this test to be performed every 12 hours. The purpose of the Channel Check is to ensure that a gross failure of instrumentation has not occurred. Thus, performance of the channel check helps to ensure that an undetected outright channel failure is limited to 12 hours. This change is consistent with NUREG-1433, Revision 1.

TECHNICAL CHANGES - MORE RESTRICTIVE (continued)

M2 This change replaces the setpoints or Allowable Values (A7) in CTS Table 3.2-7, Reactor Pressure – High ≤ 1155 psig with ≤ 1153 psig (ITS SR 3.3.4.1.4, Reactor Pressure – High). The Allowable Value (to be included in the Technical Specifications) and the Trip Setpoint (to be included in plant procedures) have been established consistent with the NYPA Engineering Standards Manual, IES-3A, "Instrument Loop Accuracy and Setpoint Calculation Methodology." The methodology used to determine the "Allowable Value" is consistent with the methodology discussed in ISA-S67.04-1994, Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation." The proposed value will ensure the most limiting requirement is met. All design limits, applied in the methodologies, were confirmed as ensuring that applicable design requirements of the associated system is maintained.

M3 A NOTE (ITS 3.3.4.1 Required Action A.2 Note) has been added to CTS Table 3.2-7 Note 1.a which specifies that the action to place a channel in trip is not applicable if the inoperable channel is a result of an inoperable breaker. If a breaker is inoperable for opening, ATWS-RPT trip capability is not maintained for the associated operating recirculation pump, therefore placing the channel in trip would not be an appropriate action to take since tripping the channel would not cause the inoperable breaker to trip. In this condition, the action should be taken according to CTS Table 3.2-7 Note 1; however, the CTS does not explicitly prohibit placing a channel in a tripped condition for this situation. Therefore, a NOTE, as described above, has been added to the CTS Table 3.2-7 Note 1.a. Accordingly, the addition of this NOTE to the CTS is considered a more restrictive change. This change is consistent with NUREG-1433, Revision 1.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA1 The detail in CTS Table 3.2-7 that the Trip Level Setting of the Reactor Water Level - Low Low Trip Function is referenced from the Top of Active Fuel (TAF) is proposed to be relocated to the Bases. CTS 1.0.Z definition specifies that the Top of Active Fuel, corresponding to the top of the enriched fuel column of each fuel bundle, is located 352.5 inches above vessel zero, which is the lowest point in the inside bottom of the reactor pressure vessel. (See General Electric drawing No. 919D690BD). These details are also proposed to be relocated to the Bases. The requirement in ITS LCO 3.3.4.1 that the ATWS instrumentation for each Function in Table 3.3.4.1-1 shall be OPERABLE, the requirements in the Table including the Allowable Value, the definition of Operability, the proposed Actions, and Surveillance Requirements are

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.3.4.2.2	Perform CHANNEL FUNCTIONAL TEST.	[92] days
SR 3.3.4.2.3	Calibrate the trip units.	184 [92] days
SR 3.3.4.2.4	Perform CHANNEL CALIBRATION. The Allowable Values shall be: a. Reactor Vessel Water Level—Low Low, Level 2: ≥ [-47] inches; and b. Reactor Steam Dome Pressure—High: ≤ [1095] psig.	[18] 24 months
SR 3.3.4.2.5	Perform LOGIC SYSTEM FUNCTIONAL TEST including breaker actuation.	[18] 24 months

DB2 INSERT B 3.3.4.1-1

The Allowable Value was derived from the analysis performed in Reference 4. K

DB2 INSERT Function a

also provides an opportunity for the high pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) systems to recover water level if feedwater is not available. The Allowable Value is referenced from a level of water 352.56 inches above the lowest point in the inside bottom of the RPV and also corresponds to the top of a 144 inch fuel column (Ref. 3).

The HPCI, RCIC and ATWS-RPT initiation functions (as described in Table 3.3.5.1-1, Function 3.a; Table 3.3.5.2-1, Function 1; and LCO 3.3.4.1.a including SR 3.3.4.1.4, respectively) describe the reactor vessel water level initiation function as "Low Low (Level 2)." The Allowable Values associated with the HPCI and RCIC initiation function is different from the Allowable Value associated with the ATWS-RPT initiation function as the ATWS function has a separate analog trip unit. Nevertheless, consistent with the nomenclature typically used in design documents, the "Low Low (Level 2)" designation is retained in describing each of these three initiation functions.

BASES

ACTIONS (continued)

B.1

Required Action B.1 is intended to ensure that appropriate actions are taken if multiple, inoperable, untripped channels within the same Function result in the Function not maintaining ATWS-RPT trip capability. A Function is considered to be maintaining ATWS-RPT trip capability when sufficient channels are OPERABLE or in trip such that the ATWS-RPT System will generate a trip signal from the given Function on a valid signal, and both recirculation pumps can be tripped. This requires two channels of the Function in the same trip system to each be OPERABLE or in trip, and the recirculation pump drive motor breakers to be OPERABLE or in trip.

The 72 hour Completion Time is sufficient for the operator to take corrective action (e.g., restoration or tripping of channels) and takes into account the likelihood of an event requiring actuation of the ATWS-RPT instrumentation during this period and that one Function is still maintaining ATWS-RPT trip capability.

C.1

Required Action C.1 is intended to ensure that appropriate Actions are taken if multiple, inoperable, untripped channels within both Functions result in both Functions not maintaining ATWS-RPT trip capability. The description of a Function maintaining ATWS-RPT trip capability is discussed in the Bases for Required Action B.1 above.

The 1 hour Completion Time is sufficient for the operator to take corrective action and takes into account the likelihood of an event requiring actuation of the ATWS-RPT instrumentation during this period.

D.1 and D.2

With any Required Action and associated Completion Time not met, the plant must be brought to a MODE or other specified condition in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 2 within 6 hours (Required Action D.2). Alternately, the associated recirculation pump may be removed from service since this

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.4.2.1 (continued)

something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

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

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

SR 3.3.4.2.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the ~~entire~~ channel will perform the intended function.

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on the reliability analysis of Reference 5.

SR 3.3.4.2.3

Calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in SR 3.3.4.2.4. If the trip setting is discovered to be less conservative than the setting accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the

(continued)

BASES (continued)

REFERENCES

1. FSAR, Figure 7.4-9, ATWS-RPT Logic Diagram.
2. NEDC-770-06-1, "Bases for Changes To Surveillance Test Intervals and Allowed Out-of-Service Times For Selected Instrumentation Technical Specifications," February 1991.

December 1992

Insert REF

DB2 INSERT REF X1

2. 10 CFR 50.36(c)(2)(ii).

3. Drawing 11825-5.01-15D, Rev. D, Reactor Assembly Nuclear Boiler, (GE Drawing 919D690BD).

4. "ATWS Overpressure Analysis for FitzPatrick," GE-NE-A42-00137-2-01, March 2000. K

SURVEILLANCE REQUIREMENTS

----------NOTE----------
When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Function maintains ATWS-RPT trip capability.

SURVEILLANCE		FREQUENCY
SR 3.3.4.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.4.1.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.4.1.3	Calibrate the trip units.	184 days
SR 3.3.4.1.4	Perform CHANNEL CALIBRATION. The Allowable Values shall be: a. Reactor Vessel Water Level – Low Low (Level 2): ≥ 105.4 inches; and b. Reactor Pressure – High: ≤ 1153 psig.	24 months
SR 3.3.4.1.5	Perform LOGIC SYSTEM FUNCTIONAL TEST including breaker actuation.	24 months

(K)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

b. Reactor Pressure – High (continued)

that result in a pressure increase, counteracting the pressure increase by rapidly reducing core power generation. For the overpressurization event, the RPT aids in the termination of the ATWS event and, along with the safety/relief valves (S/RVs), limits the peak RPV pressure to less than the ASME Section III Code Service Level C limits (1500 psig).

The Reactor Pressure – High signals are initiated from four pressure transmitters that monitor reactor steam dome pressure. Four channels of Reactor Pressure – High, with two channels in each trip system, are available and are required to be OPERABLE to ensure that no single instrument failure can preclude an ATWS-RPT from this Function on a valid signal. The Reactor Pressure – High Allowable Value is chosen to provide an adequate margin to the ASME Section III Code Service Level C allowable Reactor Coolant System pressure. The Allowable Value was derived from the analysis performed in Reference 4. | (K)

ACTIONS

A Note has been provided to modify the ACTIONS related to ATWS-RPT instrumentation channels. Section 1.3, Completion Times, specifies that once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for inoperable ATWS-RPT instrumentation channels provide appropriate compensatory measures for separate inoperable channels. As such, a Note has been provided that allows separate Condition entry for each inoperable ATWS-RPT instrumentation channel.

(continued)

BASES

ACTIONS

B.1 (continued)

recirculation pump MG drive motor breakers to be OPERABLE or in trip.

The 72 hour Completion Time is sufficient for the operator to take corrective action (e.g., restoration or tripping of channels) and takes into account the likelihood of an event requiring actuation of the ATWS-RPT instrumentation during this period and that one Function is still maintaining ATWS-RPT trip capability.

C.1

Required Action C.1 is intended to ensure that appropriate Actions are taken if multiple, inoperable, untripped channels within both Functions result in both Functions not maintaining ATWS-RPT trip capability. The description of a Function maintaining ATWS-RPT trip capability is discussed in the Bases for Required Action B.1 above.

The 1 hour Completion Time is sufficient for the operator to take corrective action and takes into account the likelihood of an event requiring actuation of the ATWS-RPT instrumentation during this period.

D.1 and D.2

With any Required Action and associated Completion Time not met, the plant must be brought to a MODE or other specified condition in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 2 within 6 hours (Required Action D.2). Alternately, the associated recirculation pump may be removed from service since this performs the intended function of the instrumentation (Required Action D.1). The allowed Completion Time of 6 hours is reasonable, based on operating experience, both to reach MODE 2 from full power conditions and to remove a recirculation pump from service in an orderly manner and without challenging plant systems. Required Action D.1 is modified by a Note which states that the Required Action is only applicable if the inoperable channel is the result of an inoperable RPT breaker. The Note clarifies the situations under which the associated Required Action would be the appropriate Required Action.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.4.1.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the channel will perform the intended function. A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions.

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on the reliability analysis of Reference 5. (K)

SR 3.3.4.1.3

Calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in SR 3.3.4.1.4. If the trip setting is discovered to be less conservative than the setting accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology.

The Frequency of 184 days is based on the reliability, accuracy, and low failure rates of these solid-state electronic components.

SR 3.3.4.1.4

A CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies the channel responds to the measured parameter within the necessary

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.4.1.4 (continued)

range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

The Frequency is based upon the assumption of a 24 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

SR 3.3.4.1.5

The LOGIC SYSTEM FUNCTIONAL TEST demonstrates the OPERABILITY of the required trip logic for a specific channel. The system functional test of the pump breakers is included as part of this Surveillance and overlaps the LOGIC SYSTEM FUNCTIONAL TEST to provide complete testing of the assumed safety function. Therefore, if a breaker is incapable of operating, the associated instrument channels would be inoperable.

The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 24 month Frequency.

REFERENCES

1. UFSAR, Figure 7.4-9 Reactor Recirculation System (FCD).

2. 10 CFR 50.36(c)(2)(ii).

3. Drawing 11825-5.01-15D, Rev. D, Reactor Assembly Nuclear Boiler, (GE Drawing 919D690BD).

4. "ATWS Overpressure Analysis for FitzPatrick," GE-NE-A42-00137-2-01, March 2000.

K

(continued)

BASES

REFERENCES (continued)

5. GENE-770-06-1-A, Bases for Changes To Surveillance Test Intervals And Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications, December 1992.

3.3.6.1

TABLE 3.2-1

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION REQUIREMENTS

Specification 3.3.6.1 A1

Functions	Trip Function	Minimum No. of Operable Instrument Channels Per Trip System (Notes 1 and 2)	Required	Trip Level Setting	Allowable Value	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action (Note 3)
[6.b] L3	[5.e]	2	[2.a] [7.a]	(1) Reactor Low Water Level (Notes 4 & 9)	≥ 177 in. above TAF	4	[H] [G]
L3	[2.g]	2		(2) Reactor Low Water Level (Notes 7 & 8)	≥ 177 in. above TAF	2	[B] [F]
	[6.a]	1	[9]	(3) Reactor High Pressure (Shutdown Cooling Isolation)	≤ 75 psig	2	[D] [F]
[3.e]	[1.a]	2		(4) Reactor Low-Low-Low Water Level	≥ 18 in. above the TAF	4	[A] [D]
L3	[5.f]	2	[2.b] [7.b]	(5) Drywell High Pressure (Notes 4 & 9)	≤ 2.7 psig	4	[G] [H] for 2.b
	[2.d]	2		(6) Drywell High Pressure (Notes 7 & 8)	≤ 2.7 psig	2	[F] [A]
[2.f]	[1.f]	2		(7) Main Steam Line Tunnel High Radiation	≤ 3 x Normal Rated Full Power Background	4	[E] [F]
	[1.b]	2		(8) Main Steam Line Low Pressure (Note 5) — MODE 1	≥ 825 psig	4	[B]
	[1.c]	2 per MSL		(9) Main Steam Line High Flow	≤ 140% of Rated Steam Flow	4	[D]
	[1.e]	8		(10) Main Steam Line Leak Detection High Temperature	≤ 40°F above max ambient	16	[E] [F]
[5.a, b, c]		4	5a → 1, 5b → 2, 5c → 1	(11) Reactor Water Cleanup System Equipment Area High Temperature	≤ 40°F above max ambient	8	[E] [D]
	[1.d]	2		(12) Condenser Low Vacuum (Note 6)	≥ 8" Hg. Vac	4	

add proposed values

Add proposed Table 3.3.6.1-1 footnote (d)

Add proposed Table 3.3.6.1-1, footnote (e)

add Function 5.d

Amendment No. 227 62

Page 3 of 22

REVISION ~~F~~ K

TECHNICAL CHANGES - MORE RESTRICTIVE

M3 Not Used.

M4 CTS 4.2.A specifies that the main steam isolation valve (MSIV) actuation instrumentation response time for the specified trip functions must be demonstrated to be within its limit once per 24 months. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals. In ITS SR 3.3.6.1.8 the ISOLATION INSTRUMENTATION RESPONSE TIME test must be performed every 24 months on a STAGGERED TEST BASIS. The Note for this SR specifies that "n" equals 2 channels for the purpose of determining the STAGGERED TEST BASIS Frequency. Therefore, SR 3.3.6.1.8 will require all channels requiring response time testing to be tested in two (2) surveillance intervals. This change is more restrictive since two (2) channels must be tested each interval for Functions 1.a and 1.b while 8 channels must be tested each interval for Function 1.c instead of one channel in each trip system required by the CTS. This change will ensure a sufficient number of channels are tested each interval to identify any significant response time degradation. K

M5 Not Used.

M6 The required number of OPERABLE channels in each trip system in CTS Table 3.2-1 for HPCI and RCIC Steam Line Low Pressure and HPCI and RCIC Turbine High Exhaust Diaphragm Pressure Functions (proposed Functions 3.b, 4.b, 3.c and 4.c for Table 3.3.6.1-1) are proposed to be increased from 1 to 2. The two trip systems for these Functions receive inputs from two channels, both of which must trip to isolate the associated valve(s), yielding a two-out-of-two logic for each trip system. The increase in channels required to be OPERABLE constitutes a more restrictive change and is necessary to ensure no single instrument failure can preclude the isolation function.

M7 CTS Table 3.2-1, Note 3.A requires the reactor to be in cold shutdown within 24 hours when the ACTIONS or Completions Times associated with inoperable Primary Containment instrumentation cannot be satisfied. These requirements are proposed to be replaced by ITS 3.3.6.1 Required Actions D.2.1 (for isolation Functions associated with main steam line isolation) and H.1 (for isolation Functions associated with primary containment isolation) which require the plant be in MODE 3 within 12 hours under the same conditions. In addition, ITS 3.3.6.1 Required Action D.2.2 and H.2 requires the plant to be in MODE 4 in 36 hours (L11). This change is more restrictive because it provides an additional requirement to place the plant in MODE 3 in 12 hours. The allowed Completion Times in Required Action D.2.1 and H.1 are reasonable, based on operating experience, to reach the required plant conditions from

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L12 (continued)

Operable. This extra time reduces the potential for a plant transient that could challenge safety systems. This change is consistent with NUREG-1433, Revision 1.

L13 Not used.

L14 The details in CTS Tables 4.1-1 and 4.1-2, that identify those portions of the instrument channel which require functional testing (trip channel and alarm) and the method of calibration (standard pressure source), respectively, are proposed to be deleted. This information is not necessary because the proposed definitions for Channel Functional Test and Channel Calibration provide the necessary guidance. This change is consistent with NUREG-1433, Revision 1.

L15 Not used.

L16 This change replaces the Trip Level Setting or Allowable Value (A16) of ≤ 160 inches of water dP to ≤ 168.24 inches of water dP for the HPCI Turbine Steam Line High Flow trip function (ITS 3.3.6.1 Function 3.a). The Allowable Values (to be included in the Technical Specifications) and the Trip Setpoints (to be included in plant procedures) have been established consistent with the NYPA Engineering Standards Manual, IES-3A, "Instrument Loop Accuracy and Setpoint Calculation Methodology." The methodology used to determine the "Allowable Values" are consistent with the methodology discussed in ISA-S67.04-1994, Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation." Any changes to the safety analysis limits, applied in the methodologies, were evaluated and confirmed as ensuring

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L13 CHANGE

Not used.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L13 CHANGE (continued)

Not used.

This page intentionally blank

Table 3.3.6.1-1 (page 1 of 6)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Main Steam Line Isolation					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1,2,3	[2]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ [-148] inches
b. Main Steam Line Pressure – Low	1	[2]	E	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ [825] psig
c. Main Steam Line Flow – High	1,2,3	[2] per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.7 SR 3.3.6.1.8	[ ] % rated steam flow
d. Condenser Vacuum – Low	1, 2(a), 3(a)	[2]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≥ [ ] inches Hg vacuum
e. Main Steam Tunnel Temperature – High	1,2,3	[2]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [ ]°F
f. Main Steam Tunnel Differential Temperature – High	1,2,3	[2]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ [ ]°F
g. Turbine Building Area Temperature – High	1,2,3	[32]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ [200]°F
h. Manual Initiation	1,2,3	[1]	G	SR 3.3.6.1.7	NA
(a) With any turbine stop valve not closed.					
(b) Not used.					
f. Main Steam Line Radiation – High	1,2,3		F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 3 times Normal Full Power Background

(continued)

REVISION F K

ABG INSERT Functions 2.d, 2.e, 2.f, 2.g

[T3.2-1(6)] [T4.1-1(8)] [T3.2-1 note 8]	d.	Drywell Pressure - High	1,2,3	2[(c)]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 2.7 psig
[T3.2-1(4)] [T4.2-1(2)]	e.	Reactor Vessel Water Level - Low Low Low (Level 1)	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 18 inches
[T3.2-1(7)] [T4.2-1(3)]	f.	Main Steam Line Radiation - High	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 3 times Normal Full Power Background
[T3.2-1 note 8] [T3.2-1(2)] [T4.1-1(6)]	g.	Reactor Vessel Water Level - Low (Level 3)	1,2,3	2[(c)]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 177 inches

K

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB6 (continued)

Line Penetration (Drywell Entrance) Area Temperature–High; Function 5.a, Suction Line Penetration Area Temperature–High; Function 5.c, RWC Heat Exchanger Area Temperature–High; and Function 5.f, Drywell Pressure–High. Functions 2.d and 2.g have been added for those Functions which include only one trip system to certain penetration flow paths to simplify the Required Actions. Footnote (c) was added to Table 3.3.6.1-1 to identify these Functions. Subsequent Notes have been renumbered, where applicable. Subsequent Functions have been renumbered, as required.

DB7 This change deletes various ITS Functions from the Table 3.3.6.1-1 since they are not included in the design: Function 1.f, Main Steam Tunnel Differential Temperature–High; Function 1.g, Turbine Building Area Temperature–High; Function 2.e, Refueling Floor Exhaust Radiation–High; Functions 3.d and 4.d, Drywell Pressure–High; Function 3.g and 4.f, HPCI and RCIC Suppression Pool Area Temperature-Time Delay Relays; Functions 3.h and 4.g, HPCI and RCIC Suppression Pool Area Differential Temperature–High; Function 3.i and 4.h, Emergency Area Cooler Temperature–High; Function 4.j, RCIC Equipment Room Differential Temperature–High; Function 5.a Differential Flow–High and Function 5.c Area Ventilation Differential Temperature–High. Subsequent Functions have been renumbered, as required.

DB8 The correct trip level Function has been incorporated for ITS Function 3.3.6.1 Function 5.e in accordance with the JAFNPP design.

DB9 ITS Table 3.3.6.1-1 Footnote (d) has been revised to identify the valves isolated by the Function consistent with the JAFNPP design.

DB10 The brackets have been removed and the proper plant specific value or requirements incorporated.

DB11 This change separates the RWC Pump Area Temperature–High Function (ITS 3.3.6.1 Function 5.b) Allowable Value into two areas (Pump Room A and Pump Room B) since the proposed "Allowable Values" are different.

DB3

INSERT ASA-2

In addition, the setting is low enough to allow the removal of heat from the reactor for a predetermined time following a scram, prevent isolation on a partial loss of feedwater and to reduce challenges to the safety/relief valves (S/RVs). The Allowable Value is referenced from a level of water 352.56 inches above the lowest point in the inside bottom of the RPV and also corresponds to the top of a 144 inch fuel column (Ref. 13). | K | K

DB4

INSERT Function 1.f

1.f. Main Steam Line Radiation – High

The Main Steam Line Radiation – High isolation signal has been removed from the MSIV isolation logic circuitry (Ref. 1); however, this isolation Function has been retained for the MSL drains valves (and other valves discussed under Function 2.f) to ensure that the assumptions utilized to determine that acceptable offsite doses resulting from a control rod drop accident (CRDA) are maintained.

Main Steam Line Radiation – High signals are generated from four radiation elements and associated monitors, which are located near the main steam lines in the steam tunnel. Four instrumentation channels of the Main Steam Line Radiation – High Function are available and required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Value was selected to be low enough that a high radiation trip results from the fission products released in the CRDA. In addition, the setting is adjusted high enough above the background radiation level in the vicinity of the main steam lines so that spurious trips are avoided at rated power.

K

This Function isolates the MSL drain valves.

DB4

INSERT Functions 2.e and 2.f (continued)

2.f. Main Steam Line Radiation – High

The Main Steam Line Radiation – High isolation signal has been removed from the MSIV isolation logic circuitry (Ref. 1); however, this isolation Function has been retained for the recirculation loop sample valves to ensure that the assumptions utilized to determine that acceptable offsite doses resulting from a CRDA are maintained.

Main Steam Line Radiation – High signals are generated from four radiation elements and associated monitors, which are located near the main steam lines in the steam tunnel. Four instrumentation channels of the Main Steam Line Radiation – High Function are available and required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Value was selected to be low enough that a high radiation trip results from the fission products released in the Design Basis CRDA. In addition, the setting is adjusted high enough above the background radiation level in the vicinity of the main steam lines so that spurious trips are avoided at rated power.

K

This Function isolates the recirculation loop sample valves.

Table 3.3.6.1-1 (page 1 of 6)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Main Steam Line Isolation					
a. Reactor Vessel Water Level – Low Low Low (Level 1)	1,2,3	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ 18 inches
b. Main Steam Line Pressure – Low	1	2	E	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ 825 psig
c. Main Steam Line Flow – High	1,2,3	2 per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ 125.9 psid
d. Condenser Vacuum – Low	1. $2^{(a)}$, $3^{(a)}$	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 8 inches Hg vacuum
e. Main Steam Tunnel Area Temperature – High	1,2,3	8	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 195°F
f. Main Steam Line Radiation – High	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 3 times Normal Full Power Background

(continued)

(a) With any turbine stop valve not closed.
(b) Not used.

Table 3.3.6.1-1 (page 2 of 6)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. Primary Containment Isolation					
a. Reactor Vessel Water Level – Low (Level 3)	1,2,3	2	H	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 177 inches
b. Drywell Pressure – High	1,2,3	2	H	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 2.7 psig
c. Containment Radiation – High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 450 R/hr
d. Drywell Pressure – High	1,2,3	2(c)	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 2.7 psig
e. Reactor Vessel Water Level – Low Low Low (Level 1)	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 18 inches
f. Main Steam Line Radiation – High	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 3 times Normal Full Power Background
g. Reactor Vessel Water Level – Low (Level 3)	1,2,3	2(c)	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 177 inches

(b) Not used.
(c) Only one trip system provided for each associated penetration.

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

1.f. Main Steam Line Radiation–High (continued)

Function 2.f) to ensure that the assumptions utilized to determine that acceptable offsite doses resulting from a control rod drop accident (CRDA) are maintained.

Main Steam Line Radiation–High signals are generated from four radiation elements and associated monitors, which are located near the main steam lines in the steam tunnel. Four instrumentation channels of the Main Steam Line Radiation–High Function are available and required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Value was selected to be low enough that a high radiation trip results from the fission products released in the CRDA. In addition, the setting is adjusted high enough above the background radiation level in the vicinity of the main steam lines so that spurious trips are avoided at rated power. (K)

This Function isolates the MSL drain valves.

Primary Containment Isolation

2.a, 2.g. Reactor Vessel Water Level–Low (Level 3)

Low RPV water level indicates that the capability to cool the fuel may be threatened. The valves whose penetrations communicate with the primary containment are isolated to limit the release of fission products. The isolation of the primary containment on Level 3 supports actions to ensure

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

2.f. Main Steam Line Radiation–High (continued)

Main Steam Line Radiation–High signals are generated from four radiation elements and associated monitors, which are located near the main steam lines in the steam tunnel. Four Instrumentation channels of the Main Steam Line Radiation–High Function are available and required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Value was selected to be low enough that a high radiation trip results from the fission products released in the Design Basis CRDA. In addition, the setting is adjusted high enough above the background radiation level in the vicinity of the main steam lines so that spurious trips are avoided at rated power. (K)

This Function isolates the recirculation loop sample valves.

High Pressure Coolant Injection and Reactor Core Isolation Cooling Systems Isolation

3.a, 4.a. HPCI and RCIC Steam Line Flow–High

Steam Line Flow–High Functions are provided to detect a break of the RCIC or HPCI steam lines and initiate closure of the steam line isolation valves of the appropriate system. If the steam is allowed to continue flowing out of the break, the reactor will depressurize and the core can uncover. Therefore, the isolations are initiated on high flow to prevent or minimize core damage. The isolation action, along with the scram function of the RPS, ensures

(continued)

SUMMARY OF CHANGES TO ITS SECTION 3.8 - REVISION K

Source of Change	Summary of Change	Affected Pages
Misc. editorial corrections	These editorial changes were identified during the preparation of the final ITS submittal: Revise ITS Bases Action B.1 and Bases JFD DB1 to be consistent with the changes made in Revision J (battery electrolyte temperature limit was revised from 60 degrees F to 65 degrees F).	**Section 3.8.6** ITS Bases mark-up, p 3.8-66 Bases JFD DB1 (p 1 of 3) Retyped ITS Bases p 3.8-60

BASES

ACTIONS

A.1, A.2, and A.3 (continued)

Continued operation is only permitted for 31 days before battery cell parameters must be restored to within Category A and B limits. Taking into consideration that, while battery capacity is degraded, sufficient capacity exists to perform the intended function and to allow time to fully restore the battery cell parameters to normal limits, this time is acceptable for operation prior to declaring the DC batteries inoperable.

B.1

When any battery parameter is outside the Category C limit for any connected cell, sufficient capacity to supply the maximum expected load requirement is not ensured and the corresponding DC electrical power subsystem must be declared inoperable. Additionally, other potentially severe conditions, such as not completing the Required Actions of Condition A within the required Completion Time, or average electrolyte temperature of representative cells falling below 60°F, also are cause for immediately declaring the associated DC electrical power subsystem inoperable.

SURVEILLANCE REQUIREMENTS

SR 3.8.6.1

This SR verifies that Category A battery cell parameters are consistent with IEEE-450 (Ref. 2), which recommends regular battery inspections (at least one per month) including voltage, specific gravity, and electrolyte temperature of pilot cells.

SR 3.8.6.2

The quarterly inspection of specific gravity and voltage is consistent with IEEE-450 (Ref. 2). In addition, within 24 hours of a battery discharge < [110] V or a battery overcharge > [150] V, the battery must be demonstrated to meet Category B limits. Transients, such as motor starting transients, which may momentarily cause battery voltage to drop to ≤ [110] V, do not constitute a battery discharge provided the battery terminal voltage and float current

(continued)

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.8.6 - BATTERY CELL PARAMETERS

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 SR 3.8.6.2 is revised to omit the Frequencies of "Once within 24 hours after a battery discharge < 110 V" and "Once within 24 hours after a battery overcharge > 150 V" since no similar CTS Surveillance Requirement exists at JAFNPP. The Frequencies associated with a battery discharge or overcharge are omitted since, they are inconsistent with the content of typical STS Surveillances, revised ISTS Surveillances do not typically contain "abnormal condition" related frequencies and, battery discharge or overcharge are adequately covered by administrative controls. In addition, this change is currently submitted as a Technical Specification Task Force Change Traveler, TSTF-201, and is pending.

PLANT-SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific system/structure/component nomenclature, equipment identification or description.

PA2 Battery Cell Parameters support the operation of the DC electrical power subsystems and the Battery Cell Parameter Specification is required to be applicable during the same MODES and conditions as in LCO 3.8.4, "DC Sources – Operating," and LCO 3.8.5, "DC Sources – Shutdown." The same safety analyses discussions as those discussed in the Bases for LCO 3.8.4 and LCO 3.8.5 are also applicable to the Battery Cell Parameter Specification. As a result, the Bases for the Battery Cell Parameter Specification in the Applicable Safety Analyses Section have been revised accordingly.

PA3 Editorial changes have been made for enhanced clarity or to correct a grammatical/typographical error.

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 ITS 3.8.6.3 Condition B.1 has been revised to reflect specific JAFNPP requirements of, ≥ 65°F for 125 VDC batteries and ≥ 50°F for 419 VDC LPCI MOV independent power supply batteries based on JAF Electrical Calculations. K

DB2 ITS 3.8.6 has been revised to reflect the specific JAFNPP requirements of, UFSAR Chapter 6, Emergency Core Cooling System.

DB3 ITS 3.8.6 has been revised to reflect the specific JAFNPP requirements

BASES

ACTIONS

A.1, A.2, and A.3 (continued)

initial verification because specific gravity measurements must be obtained for each connected cell. Taking into consideration both the time required to perform the required verification and the assurance that the battery cell parameters are not severely degraded, this time is considered reasonable. The verification is repeated at 7 day intervals until the parameters are restored to Category A and B limits. This periodic verification is consistent with the guidance provided in IEEE-450 (Ref. 4) of monitoring battery conditions at regular intervals (not to exceed one week) while completing corrective actions.

Continued operation is only permitted for 31 days before battery cell parameters must be restored to within Category A and B limits. Taking into consideration that, while battery capacity is degraded, sufficient capacity exists to perform the intended function and to allow time to fully restore the battery cell parameters to normal limits, this time is acceptable for operation prior to declaring the DC batteries inoperable.

B.1

When any battery parameter is outside the Category C limit for any connected cell, sufficient capacity to supply the maximum expected load requirement is not ensured and the corresponding DC electrical power subsystem must be declared inoperable. Additionally, other potential conditions, such as any Required Action of Condition A and associated Completion Time not met, or average electrolyte temperature of representative cells < 65°F for each 125 VDC battery, or < 50°F for each 419 VDC LPCI MOV independent power supply battery, also are cause for immediately declaring the associated DC electrical power subsystem inoperable.

SURVEILLANCE REQUIREMENTS

SR 3.8.6.1

This SR verifies that Category A battery cell parameters are consistent with IEEE-450 (Ref. 4), which recommends regular battery inspections (at least one per month) including

(continued)

ATTACHMENT 2

JAMES A. FITZPATRICK NPP
IMPROVED TECHNICAL SPECIFICATIONS
REVISION "K"
INSERT AND DISCARD INSTRUCTIONS

REMOVE	INSERT
VOLUME 6	
CTS markup for ITS 3.0 pg 3 of 5	CTS markup for ITS 3.0 pg 3 of 5

JAMES A. FITZPATRICK NPP
IMPROVED TECHNICAL SPECIFICATIONS
REVISION "K"
INSERT AND DISCARD INSTRUCTIONS

REMOVE	INSERT
VOLUME 8	
DOCs for ITS 3.3.1.1 pg 9 of 25	DOCs for ITS 3.3.1.1 pg 9 of 25
NUREG Bases markup for ITS 3.3.1.1 pg Insert Page B 3.3-30	NUREG Bases markup for ITS 3.3.1.1 pg Insert Page B 3.3-30
Bases JFDs for ITS 3.3.1.1 pgs 1 of 4 through 4 of 4	Bases JFDs for ITS 3.3.1.1 pgs 1 of 4 through 4 of 4
Retyped ITS 3.3.1.1 Bases pgs B 3.3-33 through B 3.3-37	Retyped ITS 3.3.1.1 Bases pgs B 3.3-33 through B 3.3-37
CTS markup for ITS 3.3.2.1 pgs 6 of 10 and 8 of 10	CTS markup for ITS 3.3.2.1 pgs 6 of 10 and 8 of 10
DOCs for ITS 3.3.2.1 pgs 1 of 9 through 9 of 9	DOCs for ITS 3.3.2.1 pgs 1 of 9 through 9 of 9
NUREG ITS markup for ITS 3.3.2.1 pgs 3.3-19 and 3.3-20	NUREG ITS markup for ITS 3.3.2.1 pgs 3.3-19 and 3.3-20
JFDs for ITS 3.3.2.1 pgs 1 of 3 and 2 of 3	JFDs for ITS 3.3.2.1 pgs 1 of 3 and 2 of 3
NUREG Bases markup for ITS 3.3.2.1 pg B 3.3-54	NUREG Bases markup for ITS 3.3.2.1 pg B 3.3-54
N/A	NUREG Bases markup for ITS 3.3.2.1 pg Insert Page B 3.3-54
Retyped ITS 3.3.2.1 pgs 3.3-18, 3.3-19 and 3.3-20	Retyped ITS 3.3.2.1 p 3.3-18, 3.3-19 and 3.3-20
Retyped ITS 3.3.2.1 Bases pgs B 3.3-56 through B 3.3-59	Retyped ITS 3.3.2.1 Bases pgs B 3.3-56 through B 3.3-59
CTS markup for ITS 3.3.4.1 pgs 2 of 6 and 4 of 6	CTS markup for ITS 3.3.4.1 pgs 2 of 6 and 4 of 6
DOCs for ITS 3.3.4.1 pgs 3 of 8 and 4 of 8	DOCs for ITS 3.3.4.1 pgs 3 of 8 and 4 of 8
NUREG ITS markup for ITS 3.3.4.1 pg 3.3-35	NUREG ITS markup for ITS 3.3.4.1 pg 3.3-35
NUREG Bases markup for ITS 3.3.4.1 pg Insert page B 3.3-94	NUREG Bases markup for ITS 3.3.4.1 pg Insert page B 3.3-94
NUREG Bases markup for ITS 3.3.4.1 pgs B 3.3-96, B 3.3-98 and B 3.3-100	NUREG Bases markup for ITS 3.3.4.1 pgs B 3.3-96, B 3.3-98 and B 3.3-100
NUREG Bases markup for ITS 3.3.4.1 pg Insert page B 3.3-100	NUREG Bases markup for ITS 3.3.4.1 pg Insert page B 3.3-100
Retyped ITS 3.3.4.1 pg 3.3-31	Retyped ITS 3.3.4.1 pg 3.3-31
Retyped ITS 3.3.4.1 Bases pgs B 3.3-90 and B 3.3-92	Retyped ITS 3.3.4.1 Bases pgs B 3.3-90 and B 3.3-92
Retyped ITS 3.3.4.1 Bases pgs B 3.3-94 through B 3.3-96	Retyped ITS 3.3.4.1 Bases pgs B 3.3-94 through B 3.3-96

JAMES A. FITZPATRICK NPP
IMPROVED TECHNICAL SPECIFICATIONS
REVISION "K"
INSERT AND DISCARD INSTRUCTIONS

REMOVE	INSERT
VOLUME 16	
NUREG Bases markup for ITS 3.8.6 pg B 3.8-66	NUREG Bases markup for ITS 3.8.6 pg B 3.8-66
Bases JFD for ITS 3.8.6 pg 1 of 3	Bases JFD for ITS 3.8.6 pg 1 of 3
Retyped ITS 3.8.7 Bases pg B 3.8-60	Retyped ITS 3.8.7 Bases pg B 3.8-60