



L-2025-170
10 CFR 50.90
October 29, 2025

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington D C 20555-0001

RE: Turkey Point Nuclear Plant, Units 3 and 4
Docket Nos. 50-250, 50-251
Subsequent Renewed Facility Operating License Nos. DPR-31 and DPR-41

St. Lucie Nuclear Plant, Units 1 and 2
Docket Nos. 50-335, 50-389
Renewed Facility Operating License Nos. DPR-67 and NPF-16

Point Beach Nuclear Plant, Units 1 and 2
Docket Nos. 50-266 and 50-301
Renewed Facility Operating License Nos. DPR-24 and DPR-27

Seabrook Station, Unit 1
Docket No. 50-443
Renewed Facility Operating License No. NPF-86

Fleet License Amendment Request 25-01, Adopt Topical Report AMS-TR-0720R2-A, Online
Monitoring Program

Reference: Analysis and Measurement Services Corporation letter to U.S. Nuclear Regulatory Commission, Submittal of -A Version of Analysis and Measurement Services Corporation Topical Report AMS-TR-0720R2, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters", August 20, 2021 (ADAMS Accession No. ML21235A493)

Pursuant to 10 CFR 50.90, Florida Power & Light Company (FPL), acting on behalf of itself and as agent for NextEra Energy Seabrook, LLC, and NextEra Energy Point Beach, LLC, hereby requests amendments to Subsequent Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Plant, Units 3 and 4 (Turkey Point), Renewed Facility Operating Licenses (RFOLs) DPR-67 and NPF-16 for St. Lucie Nuclear Plant, Units 1 and 2 (St. Lucie), RFOLs DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2 (Point Beach), and RFOL NPF-86 for Seabrook Station Unit 1 (Seabrook). [In this request, these licensees are referred to collectively as "NextEra"]. The proposed license amendments would modify the Technical Specifications (TS) to provide for an Online Monitoring Program in accordance with the Analysis and Measurement Services (AMS) topical report AMS-TR-0720R2-A (Reference). Specifically, the proposed change would facilitate the transition from time-based to condition-based calibrations for qualifying pressure, flow, and level transmitters based on accepted online monitoring (OLM) methods.

The enclosure to this letter provides NextEra's evaluation of the proposed change. Attachments 1, 3, 5 and 7 to the enclosure provide the Point Beach, Seabrook St. Lucie, and Turkey Point TS pages marked up to show the proposed changes, respectively. Attachments 2, 4, 6, and 8 provide the Point Beach, Seabrook St. Lucie, and Turkey Point TS Bases pages marked up to show the proposed changes, respectively. The TS Bases changes are provided for information only and will be implemented in accordance with each station's TS Bases Control Program upon issuance of the requested license amendments.

NextEra has determined that the proposed change does not involve a significant hazards consideration pursuant to 10 CFR 50.92(c), and that there are no significant environmental impacts associated with the change. Each licensee (FPL, NextEra Energy Point Beach, LLC, and NextEra Energy Seabrook, LLC)

maintains ultimate responsibility for this submittal with respect to its facilities and has reviewed and approved the amendment request and authorized the undersigned to submit this request. Each plant's Onsite Review Group (ORG) have reviewed the enclosed amendment request. In accordance with 10 CFR 50.91(b)(1), a copy of this license amendment request is being forwarded to the designees for the State of Wisconsin, New Hampshire, Massachusetts, and Florida.

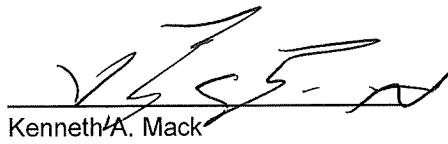
NextEra requests approval of the proposed license amendments within one year of satisfactory acceptance, with the license amendments being implemented within 180 days of approval.

This letter contains no new regulatory commitments.

Should you have any questions regarding this submission, please contact Ms. Maribel Valdez, Fleet Licensing Manager, at 561-904-5164.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 29th day of October 2025,



Kenneth A. Mack
Director, Licensing and Regulatory Compliance

Attachments (8)

1. Point Beach Units 1 and 2 Technical Specification Mark-ups
2. Point Beach Units 1 and 2 Technical Specification Bases Mark-ups
3. Seabrook Unit 1 Technical Specification Mark-ups
4. Seabrook Unit 1 Technical Specification Bases Mark-ups
5. St. Lucie Unit 1 Technical Specification Mark-ups
6. St. Lucie Unit 2 Technical Specification Mark-ups
7. St. Lucie Unit 1 Technical Specification Bases Mark-ups
8. St. Lucie Unit 2 Technical Specification Bases Mark-ups
9. Turkey Point Units 3 and 4 Technical Specification Mark-ups
10. Turkey Point Units 3 and 4 Technical Specification Bases Mark-ups

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USNRC Senior Resident Inspector, Turkey Point Nuclear Generating Station
Mr. Clark Eldredge, Florida Department of Health

USNRC Regional Administrator, Region III
Project Manager, USNRC, Point Beach Nuclear Plant
Resident Inspector, USNRC, Point Beach Nuclear Plant
Public Service Commission of Wisconsin

Fleet License Amendment Request 25-01,
Adopt Topical Report AMS-TR-0720R2-A, Online Monitoring Program

Evaluation of the Proposed Changes

1.0	SUMMARY DESCRIPTION	2
2.0	DETAILED DESCRIPTION.....	2
2.1	Background.....	2
2.2	System Design and Operation.....	3
2.3	Reason for the Proposed Change.....	6
2.4	Current Requirements / Description of the Proposed Change.....	7
3.0	TECHNICAL EVALUATION	13
3.1	OLM Implementation Process Development.....	13
3.2	OLM Program Implementation	15
3.3	OLM Noise Analysis Implementation	17
3.4	Application Specific Action Items from AMS OLM TR.....	19
4.0	REGULATORY EVALUATION.....	21
4.1	Applicable Regulatory Requirements/Criteria	21
4.2	Precedent	22
4.3	No Significant Hazards Consideration Determination Analysis.....	23
4.4	Conclusions	24
5.0	ENVIRONMENTAL CONSIDERATION.....	24
6.0	REFERENCES	25

ATTACHMENTS:

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2. Point Beach Units 1 and 2 Technical Specification Bases Mark-ups
3. Seabrook Unit 1 Technical Specification Mark-ups
4. Seabrook Unit 1 Technical Specification Bases Mark-ups
5. St. Lucie Unit 1 Technical Specification Mark-ups
St. Lucie Unit 2 Technical Specification Mark-ups
6. St. Lucie Unit 1 Technical Specification Bases Mark-ups
St. Lucie Unit 2 Technical Specification Bases Mark-ups
7. Turkey Point Units 3 and 4 Technical Specification Mark-ups
8. Turkey Point Units 3 and 4 Technical Specification Bases Mark-ups

1.0 SUMMARY DESCRIPTION

NextEra requests amendments to Subsequent Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Plant, Units 3 and 4 (Turkey Point), Renewed Facility Operating Licenses (RFOLs) DPR-67 and NPF-16 for St. Lucie Nuclear Plant, Units 1 and 2 (St. Lucie), RFOLs DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2 (Point Beach), and RFOL NPF-86 for Seabrook Station Unit 1 (Seabrook). The proposed license amendments would modify the Technical Specifications (TS) to provide for an Online Monitoring Program in accordance with the Analysis and Measurement Services (AMS) topical report AMS-TR-0720R2-A (Reference 1). Specifically, the proposed change would facilitate the transition from time-based to condition-based calibrations for qualifying pressure, flow, and level transmitters based on accepted online monitoring (OLM) methods.

2.0 DETAILED DESCRIPTION

2.1 Background

OLM technologies have been developed and validated for condition monitoring applications in a variety of process and power industries. This application of OLM is used to optimize maintenance of instrumentation and control (I&C) systems including online drift monitoring and assessment of dynamic failure modes of transmitters. Analysis and Measurement Services (AMS) Topical Report (TR) AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (References 1 and 2) focused on the application of OLM for monitoring drift of pressure, level, and flow transmitters in nuclear power plants. The TR addressed the following topics:

- Advances in OLM implementation technology to extend transmitter calibration intervals
- Experience with OLM implementation in nuclear facilities
- Comparison between OLM results and manual calibrations
- Transmitter failure modes that can be detected by OLM
- Related regulatory requirements and industry standards and guidelines
- Procedures for implementation of OLM methodology
- Changes that must be made to existing technical specifications to adopt OLM

AMS-TR-0720R2-A provided the NRC with the information needed to approve the AMS OLM methodology for implementation in nuclear power plants. The TR is intended to be used by licensees to support plant-specific technical specification changes to switch from time-based calibration frequency of pressure, level, and flow transmitters to a condition-based calibration frequency based on OLM results and to develop procedures to assess dynamic failure modes of pressure sensing systems using the noise analysis technique.

The NRC staff determined that the methodology outlined in the AMS OLM TR for applying OLM techniques to pressure, level, and flow transmitters can be used to provide reasonable assurance that required Technical Specifications (TS) instrument calibration requirements for transmitters will be maintained. This determination was based on the NRC staff finding that OLM techniques: a) are effective at identifying instrument calibration drift during plant operation, b) provide an acceptable means of identifying when manual transmitter calibration using traditional calibration methods are needed, and c) will maintain an acceptable level of performance that is traceable to calibration prime standards.

The NRC staff found that implementation of an OLM program in accordance with the approved AMS OLM TR provides an acceptable alternative to periodic manual calibration surveillance requirements upon implementation of the application-specific action items (ASAI) in Section 4.0 of its safety evaluation. The ASAs are addressed in Section 3.4 of this enclosure.

2.2 System Design and Operation

2.2.1 Point Beach Units 1 and 2

The transmitters to be included in the Online Monitoring Program provide input to the Reactor Protection Systems (RPS) and Engineered Safety Feature Actuation Systems (ESFAS) and are used for Post Accident Monitoring (PAM), Low Temperature Overpressure Protection (LTOP), and Reactor Coolant System (RCS) Leakage Detection Instrumentation.

The RPS initiates a unit shutdown, based on the values of selected unit parameters, to protect against violating the core fuel design limits and RCS pressure boundary during anticipated operational occurrences and to assist the Engineered Safety Features Systems in mitigating accidents. The RPS and related instrumentation are identified in TS 3.3.1, Table 3.3.1-1, "Reactor Protection System Instrumentation."

The ESFAS initiates necessary safety systems, based on the values of selected unit parameters, to protect against violating core design limits and the RCS pressure boundary, and to mitigate accidents. The ESFAS and related instrumentation are identified in TS 3.3.2, Table 3.3.2-1, "Engineered Safety Feature Actuation System Instrumentation."

The primary purpose of the PAM instrumentation is to display unit variables that provide information required by the control room operators during accident situations. This information provides the necessary support for the operator to take the manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for Design Basis Accidents. The PAM instrumentation is identified in TS 3.3.3, Table 3.3.3-1, "Post Accident Monitoring Instrumentation."

The LTOP controls RCS pressure at low temperatures, so the integrity of the reactor coolant pressure boundary is not compromised by violating the pressure and temperature limits. LTOP provides the allowable combinations for pressure and temperature during cooldown, shutdown, and heatup to keep from violating the pressure and temperature limits. The LTOP instrumentation is addressed in TS 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."

The RCS Leakage Detection Instrumentation provides the means for detecting RCS leakage. The containment sump used to collect unidentified leakage is instrumented to detect increases above the normal fill rates. The RCS Leakage Detection Instrumentation is addressed in TS 3.4.15, "RCS Leakage Detection Instrumentation."

The RPS, ESFAS, PAM, LTOP, and RCS Leakage Detection transmitters were evaluated in accordance with the methodology in AMS-TR-0720R2-A. The transmitters to be included in the OLM program and the bases for their selection can be found in AMS report PTB2401R0, "OLM Amenable Transmitters Report for Point Beach" (Reference 3).

Switching from time-based surveillance frequency for channel calibrations to a condition-based calibration frequency will not create any physical changes to the plants. The changes will not impact how the plant operates. NextEra will use condition-based frequency to determine when transmitter calibrations are needed instead of performing calibrations based on a calendar frequency. Existing calibration methods will be used when it is determined that transmitter calibration is needed.

2.2.2 Seabrook Station

The transmitters to be included in the Online Monitoring Program provide input to the Reactor Trip Systems (RTS), ESFAS, power-operated relief valves (PORVs), and Overpressure Protection System and are used for monitoring departure from nucleate boiling (DNB)-related parameters, Remote Shutdown Systems, PAM, and RCS Leakage Detection.

The limits on the DNB-related parameters assure that each of the parameters is maintained within the normal steady-state envelope of operation assumed in the transient and accident analyses. The DNB-related instrumentation is addressed in TS 3.2.5, "DNB PARAMETERS."

The RTS initiates a unit shutdown, based on the values of selected unit parameters, to protect against violating the core fuel design limits and RCS pressure boundary during anticipated operational occurrences and to assist the Engineered Safety Features Systems in mitigating accidents. The RTS and related instrumentation are identified in TS 3.3.1, Table 3.3-1, REACTOR TRIP SYSTEM INSTRUMENTATION."

The ESFAS initiates necessary safety systems, based on the values of selected unit parameters, to protect against violating core design limits and the RCS pressure boundary, and to mitigate accidents. The ESFAS and related instrumentation are identified in TS 3.3.2, Table 3.3-3, "ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION."

The Remote Shutdown System provides the operator with sufficient instrumentation and controls to place and maintain the unit in a safe shutdown condition from a location other than the control room. This capability is necessary to protect against the possibility that the control room becomes inaccessible. The Remote Shutdown System instrumentation is identified in TS 3.3.3.5, Table 3.3-9, "REMOTE SHUTDOWN SYSTEM."

The primary purpose of the PAM instrumentation is to display unit variables that provide information required by the control room operators during accident situations. This information provides the necessary support for the operator to take the manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for Design Basis Accidents. The PAM instrumentation is identified in TS 3.3.3.6, Table 3.3-10, "ACCIDENT MONITORING INSTRUMENTATION."

The PORVs and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. Operation of the PORVs minimizes the undesirable opening of the spring-loaded pressurizer Code safety valves. The PORV instrumentation is addressed in TS 3.4.4, "RELIEF VALVES."

The RCS Leakage Detection Instrumentation provides the means for detecting RCS leakage. The containment drainage sump used to collect unidentified leakage is instrumented to detect increases above the normal fill rates. The RCS Leakage Detection Instrumentation is addressed in TS 3.4.6.1, "LEAKAGE DETECTION SYSTEMS."

The Overpressure Protection System controls prevent RCS overpressure at low temperatures, so the integrity of the reactor coolant pressure boundary is not compromised by violating the pressure and temperature limits. The Overpressure Protection System provides the allowable combinations for pressure and temperature during cooldown, shutdown, and heatup to keep from violating the pressure and temperature limits. The Overpressure Protection System instrumentation is addressed in TS 3.4.12, "OVERPRESSURE PROTECTION SYSTEMS."

The RTS, ESFAS, DNB-related, Remote Shutdown System, PAM, PORV, RCS Leakage Detection, and Overpressure Protection System transmitters were evaluated in accordance with the methodology in AMS-TR-0720R2-A. The transmitters to be included in the OLM program and the bases for their selection can be found in AMS report SBR2402R0, "OLM Amenable Transmitters Report for Seabrook" (Reference 4).

Switching from time-based surveillance frequency for channel calibrations to a condition-based calibration frequency will not create any physical changes to the plants. The changes will not impact how the plant operates. NextEra will use condition-based frequency to determine when transmitter calibrations are needed instead of performing calibrations based on a calendar frequency. Existing calibration methods will be used when it is determined that transmitter calibration is needed.

2.2.3 St. Lucie Units 1 and 2

The transmitters to be included in the Online Monitoring Program provide input to the RPS and ESFAS and are used for PAM, Remote Shutdown System, LTOP, and RCS Leakage Detection.

The RPS initiates a reactor trip, based on the values of selected unit parameters, to protect against violating the core fuel design limits and RCS pressure boundary during anticipated operational occurrences and to assist the Engineered Safety Features Systems in mitigating accidents. The RPS and related instrumentation are identified in St. Lucie Unit 1 and St. Lucie Unit 2 TS 3.3.1, Table 3.3.1-1, "Reactor Protective System Instrumentation."

The ESFAS initiates necessary safety systems, based on the values of selected unit parameters, to protect against violating core design limits and the RCS pressure boundary, and to mitigate accidents. The ESFAS and related instrumentation are identified in St. Lucie Unit 1 and St. Lucie Unit 2 TS 3.3.3, Table 3.3.3-1, "Engineered Safety Features Actuation System Instrumentation."

The primary purpose of the PAM instrumentation is to display unit variables that provide information required by the control room operators during accident situations. This information provides the necessary support for the operator to take the manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for Design Basis Accidents. The PAM instrumentation is identified in St. Lucie Unit 1 and St. Lucie Unit 2 TS 3.3.9, Table 3.3.9-1, "Post Accident Monitoring Instrumentation."

The Remote Shutdown System provides the operator with sufficient instrumentation and controls to place and maintain the unit in a safe shutdown condition from a location other than the control room. This capability is necessary to protect against the possibility that the control room becomes inaccessible. The Remote Shutdown System instrumentation is addressed in St. Lucie Unit 1 and St. Lucie Unit 2 TS 3.3.10, "Remote Shutdown System."

The LTOP controls RCS pressure at low temperatures, so the integrity of the reactor coolant pressure boundary is not compromised by violating the pressure and temperature limits. LTOP provides the allowable combinations for pressure and temperature during cooldown, shutdown, and heatup to keep from violating the pressure and temperature limits. The LTOP instrumentation is addressed in St. Lucie Unit 1 and St. Lucie Unit 2 TS 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."

The RCS Leakage Detection Instrumentation provides the means for detecting RCS leakage. The reactor cavity sump used to collect unidentified leakage is instrumented to detect increases above the normal flow rates. The RCS Leakage Detection Instrumentation is addressed in St. Lucie Unit 1 and St. Lucie Unit 2 TS 3.4.15, "RCS Leakage Detection Instrumentation".

The RPS, ESFAS, PAM, Remote Shutdown System, LTOP and RCS Leakage Detection transmitters were evaluated in accordance with the methodology in AMS-TR-0720R2-A. The transmitters to be included in the OLM program and the bases for their selection can be found in AMS report STL2402R0, "OLM Amenable Transmitters Report for St. Lucie" (Reference 5).

Switching from time-based surveillance frequency for channel calibrations to a condition-based calibration frequency will not create any physical changes to the plants. The changes will not impact how the plants operate. NextEra will use condition-based frequency to determine when transmitter calibrations are needed.

instead of performing calibrations based on a calendar frequency. Existing calibration methods will be used when it is determined that transmitter calibration is needed.

2.2.4 Turkey Point Units 3 and 4

The transmitters to be included in the Online Monitoring Program provide input to the RTS and ESFAS and are used for PAM, the Overpressure Mitigating Systems (OMS), and RCS Leakage Detection Instrumentation.

The RTS initiates a unit shutdown, based on the values of selected unit parameters, to protect against violating the core fuel design limits and RCS pressure boundary during anticipated operational occurrences and to assist the Engineered Safety Features Systems in mitigating accidents. The RTS and related instrumentation are identified in TS 3.3.1, Table 3.3.1-1, "Reactor Trip System Instrumentation."

The ESFAS initiates necessary safety systems, based on the values of selected unit parameters, to protect against violating core design limits and the RCS pressure boundary, and to mitigate accidents. The ESFAS and related instrumentation are identified in TS 3.3.2, Table 3.3.2-1, "Engineered Safety Feature Actuation System Instrumentation."

The primary purpose of the PAM instrumentation is to display unit variables that provide information required by the control room operators during accident situations. This information provides the necessary support for the operator to take the manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for Design Basis Accidents. The PAM instrumentation is identified in TS 3.3.3, Table 3.3.3-1, "Post Accident Monitoring Instrumentation."

The OMS controls RCS pressure at low temperatures, so the integrity of the reactor coolant pressure boundary is not compromised by violating the pressure and temperature limits. OMS provides the allowable combinations for pressure and temperature during cooldown, shutdown, and heatup to keep from violating the pressure and temperature limits. The OMS instrumentation is addressed in TS 3.4.12, "Overpressure Mitigating Systems (OMS)."

The RCS Leakage Detection Instrumentation provides the means for detecting RCS leakage. The containment sump used to collect unidentified leakage is instrumented to detect increases above the normal fill rates. The RCS Leakage Detection Instrumentation is addressed in TS 3.4.15, "RCS Leakage Detection Instrumentation."

The RTS, ESFAS, PAM, OMS, and RCS Leakage Detection transmitters were evaluated in accordance with the methodology in AMS-TR-0720R2-A. The transmitters to be included in the OLM program and the bases for their selection can be found in AMS report TKP2401R0, "OLM Amenable Transmitters Report for Turkey Point" (Reference 6).

Switching from time-based surveillance frequency for channel calibrations to a condition-based calibration frequency will not create any physical changes to the plants. The changes will not impact how the plants operate. NextEra will use condition-based frequency to determine when transmitter calibrations are needed instead of performing calibrations based on a calendar frequency. Existing calibration methods will be used when it is determined that transmitter calibration is needed.

2.3 Reason for the Proposed Change

NextEra is proposing to apply the NRC-approved OLM methodology of AMS-TR-0720R2-A to facilitate a transition from time-based to condition-based calibration frequencies for qualifying pressure, flow and level transmitters. The use of the NRC-approved OLM methodology ensures that plant safety is maintained by

demonstrating continuously that the transmitters are functioning as designed. The OLM methodology encompasses environmental and process conditions in the assessment of transmitter calibration.

As described in AMS-TR-0720R2-A, condition-based monitoring for transmitter calibrations provides additional safety benefits. Because OLM provides for early detection of transmitters approaching out-of-tolerance limits, contemporaneous operability is assured and conditions warranting past-operability assessments are reduced or eliminated. The use of OLM reduces occupational exposure as well as the opportunity for human errors caused by unnecessary transmitter calibrations. Data collected during OLM activities is used to target poorly performing instruments for more frequent calibrations or other corrective actions which address any potential impact on long-term plant performance

2.4 Current Requirements / Description of the Proposed Change

The proposed TS changes are an adaptation from the illustrative changes presented in AMS-TR-0720R2-A that simplify the required plant-specific changes. The proposed TS definition changes eliminated the need to modify the TS associated with channel calibration and response time surveillance requirements (SRs), as applicable. The proposed Online Monitoring (OLM) Program description was reorganized to better align with the OLM implementation activities. [Proposed TS changes are noted in ***bold, italic, underlined*** font.]

2.4.1 Point Beach Units 1 and 2

NextEra proposes to change the definition of CHANNEL CALIBRATION in Point Beach TS 1.1 "Definitions".

Current definition of CHANNEL CALIBRATION

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

Proposed definition of CHANNEL CALIBRATION

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY ***(excluding transmitters in the Online Monitoring Program)***. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

NextEra proposes to add TS 5.5.20, Online Monitoring Program, for the Point Beach TS, as shown below:

TS 5.5.20 Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-

situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with an NRC approved methodology.
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.
 - 4) Documentation of the results of the online monitoring data analysis.
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.
- d. The provisions of Surveillance Requirement 3.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.

2.4.2 Seabrook Station

NextEra proposes to change the definitions of CHANNEL CALIBRATION, ESF RESPONSE TIME, and RTS RESPONSE TIME in Seabrook TS 1.0 "Definitions".

Current definition of CHANNEL CALIBRATION

- 1.5 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel such that it responds within the required range and accuracy to known values of input. The CHANNEL CALIBRATION shall encompass the entire channel including the sensors and alarm, interlock and/or trip functions. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program from the devices included in the step.

Proposed definition of CHANNEL CALIBRATION

- 1.5 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel such that it responds within the required range and accuracy to known values of input. The CHANNEL CALIBRATION shall encompass the entire channel including the sensors and alarm, interlock and/or trip functions (excluding transmitters in the Online Monitoring Program). The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program from the devices included in the step.

Current definition of ENGINEERED SAFETY FEATURES (ESF) RESPONSE TIME

- 1.14 The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

Proposed definition of ENGINEERED SAFETY FEATURES (ESF) RESPONSE TIME

- 1.14 The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC (including transmitters in the Online Monitoring Program).

Current definition of REACTOR TRIP SYSTEM (RTS) RESPONSE TIME

- 1.29 The RTS RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS Trip Setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

Proposed definition of REACTOR TRIP SYSTEM (RTS) RESPONSE TIME

- 1.29 The RTS RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS Trip Setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC (including transmitters in the Online Monitoring Program).

NextEra proposes to add TS 6.7.6.q, Online Monitoring Program, for the Seabrook TS, as shown below:

TS 6.7.6.q. Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with an NRC approved methodology.**
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.**
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.**
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.**
 - 4) Documentation of the results of the online monitoring data analysis.**
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.**
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.**
- d. The provisions of Surveillance Requirement 4.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.**

2.4.3 St. Lucie Plant Units 1 and 2

NextEra proposes to change the definitions of CHANNEL CALIBRATION, ESF RESPONSE TIME, and RPS RESPONSE TIME in St. Lucie Unit 1 TS 1.1 "Definitions" and St. Lucie Unit 2 TS 1.1 "Definitions".

Current definition of CHANNEL CALIBRATION

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

Proposed definition of CHANNEL CALIBRATION

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST **(excluding transmitters in the Online Monitoring Program)**. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel

steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

Current definition of ENGINEERED SAFETY FEATURES (ESF) RESPONSE TIME

The ESF RESPONSE TIME shall be that time interval from FEATURE (ESF) RESPONSE when the monitored parameter exceeds its ESF actuation TIME setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

Proposed definition of ENGINEERED SAFETY FEATURES (ESF) RESPONSE TIME

The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology **(including transmitters in the Online Monitoring Program)**.

Current definition of REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME

The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power to the CEAs drive mechanism is interrupted. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

Proposed definition of REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME

The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power to the CEAs drive mechanism is interrupted. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology **(including transmitters in the Online Monitoring Program)**.

NextEra proposes to add TS 5.5.18, Online Monitoring Program, for the St. Lucie Unit 1 TS and the St. Lucie Unit 2 TS, as shown below:

TS 5.5.18 Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with an NRC approved methodology.**
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.**
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.**
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.**
 - 4) Documentation of the results of the online monitoring data analysis.**
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.**
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.**
- d. The provisions of Surveillance Requirement 3.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.**

2.4.4 Turkey Point Units 3 and 4

NextEra proposes to change definition of CHANNEL CALIBRATION in Turkey Point TS 1.1 "Definitions".

Current definition of CHANNEL CALIBRATION

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

Proposed definition of CHANNEL CALIBRATION

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for

channel OPERABILITY (excluding transmitters in the Online Monitoring Program). Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

NextEra proposes to add TS 5.5.18, Online Monitoring Program, for the Turkey Point TS, as shown below.

TS 5.5.18 Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with an NRC approved methodology.**
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.**
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.**
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.**
 - 4) Documentation of the results of the online monitoring data analysis.**
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.**
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.**
- d. The provisions of Surveillance Requirement 3.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.**

3.0 TECHNICAL EVALUATION

3.1 OLM Implementation Process Development

This section describes the steps that were performed to implement the OLM program for Point Beach, Seabrook, St. Lucie, and Turkey Point by following the steps identified in AMS-TR-0720R2-A Section 11.1.1. This work is documented in the AMS reports on OLM Amenable Transmitters (References 3, 4, 5, and 6) and OLM Analysis Methods and Limits (References 7, 8, 9, and 10), and are available upon request..

The AMS reports on OLM Amenable Transmitters address steps 1 through 6 from AMS-TR-0720R2-A Section 11.1.1. These steps were designed to arrive at a list of transmitters that can be included in an OLM

program and determine how to obtain OLM data. The Point Beach, Seabrook, St. Lucie, and Turkey Point transmitters to be included in the OLM program and the bases for their selection can be found in the associated site reports on OLM Amenable Transmitters.

1. Determine if Transmitters are Amenable to OLM

AMS-TR-0720R2-A Chapter 12 includes Table 12.4 that lists the nuclear grade transmitter models that are amenable to OLM. A transmitter model that is not listed in this table should only be added to the OLM program if it can be shown by a similarity analysis that its failure modes are the same as the listed transmitter models or are otherwise detectable by OLM.

2. List Transmitters in Each Redundant Group

This step establishes how to group the transmitters and evaluates the redundancy of each group.

3. Determine if OLM Data Covers Applicable Setpoints

This step evaluates the OLM data for each group to determine if it covers applicable setpoints. Additional details are described in AMS-TR-0720R2-A Chapter 14.

4. Calculate Backstops

A backstop, as described in AMS-TR-0720R2-A Chapter 13, must be established for each group of redundant transmitters amenable to OLM as a defense against common mode drift. The backstop identifies the maximum period between calibrations without calibrating at least one transmitter in a redundant group.

5. Establish Method of Data Acquisition

OLM data is normally available in the plant computer or an associated data historian. If data is not available from the plant computer or historian, a custom data acquisition system including hardware and software must be employed to acquire the data.

6. Specify Data Collection Duration and Sampling Rate

OLM data must be collected during startup, normal operation, and shutdown periods at the highest sampling rate by which the plant computer takes data. AMS-TR-0720R2-A Chapter 15 describes a process to determine the minimum sampling rate for OLM data acquisition to monitor for transmitter drift. AMS-TR-0720R2-A Chapter 8 describes a process to help determine the optimal sampling rate and minimum duration of OLM data collection.

AMS reports on OLM Analysis Methods and Limits (References 7, 8, 9, and 10) address steps 7 and 8 from AMS-TR-0720R2-A, Section 11.1.1. These steps address the calculation of the OLM limits and establish the methods of OLM data analysis.

7. Identify Data Analysis Methods

OLM implementations must employ both simple averaging and parity space methods for data analysis as described in AMS-TR-0720R2-A, Chapter 6.

8. Establish OLM Limits

OLM limits must be established as described in AMS-TR-0720R2-A, Chapter 7, for each group of redundant transmitters. Calculation of OLM limits must be based on combining uncertainties of

components of each instrument channel from the transmitter in the field to the OLM data storage. The AMS report on OLM Analysis Methods and Limits provides the OLM Limit calculations for the transmitters that are amenable to OLM at Point Beach, Seabrook, St. Lucie, and Turkey Point.

3.2 OLM Program Implementation

This section summarizes the steps that must be followed to implement the OLM program for transmitter drift monitoring at Point Beach, Seabrook, St. Lucie, and Turkey Point in accordance with AMS-TR-0720R2-A. The steps described in this section are repeated at each operating cycle to identify the transmitters that should be scheduled for a calibration check using data from periods of startup, normal operation, and shutdown. Additional details regarding the OLM Program Implementation discussed in this section are contained in the AMS reports on OLM Drift Monitoring Program (References 11, 12, 13, and 14).

AMS-TR-0720R2-A, Section 11.1.2, identifies eleven steps that must be followed each operating cycle to identify the transmitters that should be scheduled for a calibration check at the ensuing outage. Table 1 provides a mapping between AMS-TR-0720R2-A, Section 11.1.2, and the LAR section where the item is addressed. Implementation of these steps is performed using the AMS Bridge and the AMS Calibration Reduction System (CRS) software programs that were developed by AMS under their 10 CFR Part 50 Appendix B Software Quality Assurance (SQA) program.

Table 1: Mapping to AMS-TR-0720R2-A Section 11.1.2

Item	Step	Step Number in Section 11.1.2 of AMS-TR-0720R2-A	LAR Section
1	Retrieve OLM Data	9	3.2.1
2	Perform Data Qualification	10	3.2.2
3	Select Appropriate Region of Any Transient Data	11	3.2.3
4	Perform Data Analysis	12	3.2.4
5	Plot the Average Deviation for Each Transmitter	13	3.2.5
6	Produce a Table for Each Group That Combines All Results	14	3.2.6
7	Determine OLM Results for Each Transmitter	15	3.2.7
8	Address Uncertainties in the Unexercised Portion of Transmitter Range	16	3.2.8
9	Select Transmitters to Be Checked for Calibration as a Backstop	17	3.2.9
10	Perform Dynamic Failure Mode Assessment	18	3.2.10
11	Produce a Report of Transmitters Scheduled for Calibration Check	19	3.2.11

1. Retrieve OLM Data

The first step in performing transmitter drift monitoring is to retrieve the OLM data. OLM data must be retrieved during periods of startup, normal operation, and shutdown. The method of data acquisition, data collection duration, sampling rate, and list of sensors whose data will be retrieved have been established as described in Section 3.1 of this document. The OLM data for Point Beach, Seabrook, St. Lucie, and Turkey Point will be retrieved using the AMS Bridge software which will retrieve data from the plant data historian and produce binary data files that are compatible with the AMS Calibration Reduction System (CRS) software or as a text files from the data historian or other data sources at each plant site, as applicable. AMS procedure OLM2201, "Procedure for Online Monitoring Data Retrieval," has been developed for performing the data retrieval using the AMS Bridge software (Reference 15).

2. Perform Data Qualification

OLM data retrieved from plant historians sometimes contains anomalies such as spikes, missing data, stuck data, and saturated data. The portion of data containing these anomalies should be excluded, filtered, and/or cleaned prior to analysis. The AMS CRS software provides functionality for these tasks and will be used to perform data qualification. AMS procedure OLM2202, "Procedure for Performing Online Monitoring Data Qualification and Analysis," has been developed for performing data qualification and analysis using the AMS CRS software (Reference 16).

3. Select Appropriate Region of Any Transient Data

The AMS CRS software provides means to select the regions of transient data as described in Step 11 of Section 11.1.2 of AMS-TR-0720R2-A and will be used to perform these selections. This activity is part of OLM data analysis and is addressed in the data qualification and analysis procedure.

4. Perform Data Analysis

Several tasks that must be performed in OLM data analysis for startup, normal operation, and shutdown data including:

- (1) Calculate the process estimate,
- (2) Calculate the deviation of each transmitter from the process estimate and plot the outcome,
- (3) Partition the deviation data into region(s) by percent of span,
- (4) Calculate and plot the average deviation for each region versus percent of span,
- (5) Select appropriate process estimation techniques, filtering parameters, and remove any outliers,
- (6) Determine if average deviations exceed OLM limits for any region, and
- (7) Review, document, and store the details and results of analysis.

The AMS CRS software provides functionality for performing these tasks and will be used to perform OLM data analysis. Detailed steps for performing OLM data analysis are provided in the data qualification and analysis procedure.

5. Plot the Average Deviation for Each Transmitter

The AMS CRS software provides functionality for plotting the average deviation for each transmitter as described in Step 13 of Section 11.1.2 of AMS-TR-0720R2-A and will be used to perform this task. This activity is part of OLM data analysis and is addressed in detail in the data qualification and analysis procedure.

6. Produce a Table for Each Group That Combines All Results

The AMS CRS software provides functionality for producing a table for each group of redundant transmitters that combines all results as described in Step 14 of Section 11.1.2 of AMS-TR-0720R2-A and will be used to perform this task. This activity is part of OLM data analysis and is addressed in detail in the data qualification and analysis procedure.

7. Determine OLM Results for Each Transmitter

OLM results must be produced by the OLM analyst upon completion of data analysis for a complete operating cycle. The AMS CRS software provides functionality for producing these results as described in Step 15 of Section 11.1.2 of AMS-TR-0720R2-A and will be used to perform this task. This activity is part of OLM data analysis and is addressed in detail in the data qualification and analysis procedure.

8. Address Uncertainties in the Unexercised Portion of Transmitter Range

The AMS CRS software provides functionality for addressing uncertainties in the unexercised portion of the transmitter ranged as described in Step 13 of Section 11.1.2 of AMS-TR-0720R2-A and will be used to perform this task. This activity is part of OLM data analysis and is addressed in detail in the data qualification and analysis procedure.

9. Select Transmitters to Be Checked for Calibration as a Backstop

The AMS procedure OLM2202 is also used for maintaining the backstops for OLM. It provides detailed steps for selecting transmitters to be checked for calibration as a backstop as described in Step 17 of Section 11.1.2 of AMS-TR-0720R2-A.

10. Perform Dynamic Failure Mode Assessment

As described in Step 18 of Section 11.1.2 of AMS-TR-0720R2-A, dynamic failure mode assessment must be performed using the noise analysis technique to cover dynamic failures that are not detectable by the OLM process for transmitter drift monitoring. Details on how this will be addressed are described in LAR Section 3.3.

11. Produce a Report of Transmitters Scheduled for Calibration Check

The results of OLM analysis must be compiled in a report and independently reviewed. The transmitters that have been flagged must be scheduled for a calibration check at the next opportunity. The AMS CRS software provides functionality for producing this report and will be used to perform this task. This activity is part of OLM data analysis and is addressed in detail in the data qualification and analysis procedure.

3.3 OLM Noise Analysis Implementation

Some licensees have extended or eliminated transmitter response time testing requirements with NRC approval based, in part, on the performance of manual calibrations. Manual calibrations will not be performed except on transmitters that are flagged by OLM. The noise analysis methodology is provided in this document to enable licensees to assess the dynamic failure modes of transmitters that are not covered by the OLM process for transmitter drift monitoring.

This section summarizes the steps that must be followed to implement the noise analysis technique for transmitter dynamic failure mode assessment in accordance with AMS-TR-0720R2-A. Additional details regarding the implementation of the noise analysis technique discussed in this section are provided in the AMS report on Noise Analysis Program (References 17, 18, 19, and 20).

As described in Section 11.3.3 of AMS-TR-0720R2-A, six steps must be followed to assess dynamic failure modes of pressure transmitters. Table 2 provides a mapping of the six steps in Section 11.3.3 of AMS-TR-0720R2-A and the section where they are addressed in this document. Implementation of these steps is performed using qualified noise data acquisition equipment and software programs that were developed by AMS under their 10 CFR Part 50 Appendix B Software Quality Assurance (SQA) program. The transmitters with response time requirements have been identified in the AMS reports on OLM Amenable Transmitters (References 3, 4, 5, and 6).

Table 2: Mapping to AMS-TR-0720R2-A Section 11.3.3

Item	Step	Step Number in Section 11.3.3 of AMS-TR-0720R2-A	LAR Section
1	Select Qualified Noise Data Acquisition Equipment	1	3.3.1
2	Connect Noise Data Acquisition Equipment to Plant Signals	2	3.3.2
3	Collect and Store Data for Subsequent Analysis	3	3.3.3
4	Screen Data for Artifacts and Anomalies	4	3.3.4
5	Perform Data Analysis	5	3.3.5
6	Review and Document Results	6	3.3.6

1. Select Qualified Noise Data Acquisition Equipment

The first step in performing noise analysis is to select qualified noise data acquisition equipment. This equipment must have a valid calibration traceable to the National Institute of Standards and Technology and meet a set of performance criteria detailed Step 1 of Section 11.3.3 of AMS-TR-0720R2-A. The equipment used to acquire data will be the AMS OLM data acquisition system which is comprised of hardware and software that has been developed and tested using AMS 10 CFR Part 50 Appendix B hardware and software QA program.

2. Connect Noise Data Acquisition Equipment to Plant Signals

AMS Procedure NPS1501, "Procedure for Noise Data Collection from Plant Sensors," is used for the connection of the noise data acquisition equipment for performing noise analysis testing (Reference 21). This procedure identifies the locations for connection to process signals as well as the qualified personnel who may connect the data acquisition system at these locations. The noise data acquisition system should be connected to as many transmitters as allowed by the number of data acquisition channels and the plant procedures. Multiple transmitters (e.g., up to 32) can be tested simultaneously to reduce the test time. Each data acquisition channel must be connected to the transmitter current loop as shown in Section 11.3.3 of AMS-TR-0720R2-A.

3. Collect and Store Data for Subsequent Analysis

The noise data should be collected during normal plant operation at full temperature, pressure, and flow and analyzed in real time or stored to be analyzed later. However, noise data taken at other conditions is acceptable as long as there is enough process fluctuation with sufficient amplitude and frequency content to drive the transmitters to reveal their dynamic characteristics. Noise data collection

will be performed using AMS OLM Data Acquisition software which has been developed and tested using AMS software verification and validation program which conforms to 10 CFR Part 50 Appendix B. The use of this software for noise data acquisition is addressed in the AMS procedure for performing noise analysis testing (Reference 21).

4. Screen Data for Artifacts and Anomalies

Noise data may contain anomalies that must be excluded, filtered, and/or cleaned prior to data analysis. AMS Procedure NAR2201, "Procedure for Performing Dynamic Failure Mode Assessment Using Noise Analysis," is used for performing noise analysis data analysis (Reference 22) and will be performed using AMS noise analysis software.

5. Perform Data Analysis

Noise data analysis will be performed as described in Section 11.3.3 Step 5 in AMS-TR-0720R2-A using AMS noise analysis software. General data analysis steps for the analyst as well as detailed steps for performing noise data analysis are also provided in the AMS procedure for performing noise analysis data analysis (Reference 22).

6. Review and Document Results

Results of noise data analysis will be reviewed and approved by qualified personnel and documented in a report. This process is detailed in the AMS procedure for performing noise analysis data analysis (Reference 22).

3.4 Application Specific Action Items from AMS OLM TR

NRC approval of the AMS OLM TR (Reference 1) required licensee implementation of the five Application-Specific Action Items (ASAI) in Section 4.0 of its safety evaluation. Each ASAI is addressed below.

ASAI-1 - Evaluation and Proposed Mark-up of Existing Plant Technical Specifications

When preparing a license amendment request to adopt OLM methods for establishing calibration frequency, licensees should consider markups that provide clear requirements for accomplishing plant operations, engineering data analysis, and instrument channel maintenance. Such TS changes would need to include appropriate markups of the TS tables describing limiting conditions for operation and surveillance requirements, the technical basis for the changes, and the administrative programs section.

Response to ASAI 1:

The proposed TS changes are described in Section 2.4 and identified in the TS markup pages of Attachments 1, 3, 5 and 7 for Point Beach, Seabrook, St. Lucie, and Turkey Point, respectively. The proposed changes modify applicable definitions and add a new program for OLM in the Administrative Controls sections in each of the associated TS. No changes to the associated TS tables describing Limiting Conditions for Operation or Surveillance Requirements were necessary. Attachments 2, 4, 6, and 8 of this amendment request provide the Point Beach, Seabrook St. Lucie, and Turkey Point TS Bases pages marked up to show the proposed changes, respectively. The TS Bases changes are provided for information only and will be implemented in accordance with each station's TS Bases Control Program upon issuance of the requested license amendments.

ASAI-2 - Identification of Calibration Error Source

When determining whether an instrument can be included in the plant OLM program, the licensee shall evaluate calibration error source in order to account for the uncertainty due to multiple instruments used to

support the transfer of transmitter signal data to the data collection system. Calibration errors identified through OLM should be attributed to the transmitter until testing can be performed on other support devices to correctly determine the source of calibration error and reallocate errors to these other loop components.

Response to ASAI 2:

Calibration error is evaluated as part of the calculation of OLM limits as described in Section 3.1.8. The calculation of OLM limits is based on combining uncertainties of components of each instrument channel from the transmitter in the field to the OLM data storage. The OLM data assessment methods described in Section 3.2.7 include guidance to consider calibration errors identified through OLM as coming from the transmitter until testing can be performed on other support devices to correctly determine the source of calibration error and reallocate errors to these other loop components.

ASAI 3 - Response Time Test Elimination Basis

If the plant has eliminated requirements for performing periodic RT testing of transmitters to be included in the OLM program, then the licensee shall perform an assessment of the basis for RT test elimination to determine if this basis will remain valid upon implementation of the OLM program and to determine if the RT test elimination will need to be changed to credit the OLM program rather than the periodic calibration test program.

Response to ASAI 3:

Seabrook and St. Lucie previously eliminated requirements for performing periodic response time testing based on the periodic calibration of transmitters that are now proposed for inclusion in their respective OLM programs. Seabrook and St. Lucie will change the basis for response time test elimination to the methodology described in Section 3.3, which is based on the noise analysis methodology described in Section 11.3 of the AMS OLM TR. The Point Beach and Turkey Point TSs do not have response time surveillance requirements.

ASAI 4 - Use of Calibration Surveillance Interval Backstop

In its application for a license or license amendment to incorporate OLM methods for establishing calibration surveillance intervals, applicants or licensees should describe how they intend to apply backstop intervals as a means for mitigating the potential that a process group could be experiencing undetected common mode drift characteristics.

Response to ASAI 4:

The NextEra OLM programs for Point Beach, Seabrook, St. Lucie, and Turkey Point adopt the calibration surveillance interval backstop methods described in Section 3.2.9, which is based on the backstop methodology described in Section 13 of the AMS OLM TR.

Appropriate parts of the Updated Final Safety Analysis Report (UFSAR) and TS Bases for Point Beach, Seabrook, St. Lucie, and Turkey Point will be modified to describe the use of AMS-TR-0720R2-A. The use of OLM to switch from time-based calibration frequency of pressure, level, and flow transmitters to a condition-based calibration frequency based on OLM results will be added to the appropriate parts of UFSAR Chapter 7 to include a list of the qualifying transmitters included in the OLM program. The appropriate parts of UFSAR Chapter 7 and the TS Bases will also be modified to describe the calibration surveillance interval backstop methods described in Section 13 of the AMS OLM TR and the use of OLM to assess dynamic failure modes of pressure-type sensing systems using the noise analysis technique to support the continued elimination of transmitter response time testing.

ASAI 5 - Use of Criteria other than in AMS OLM TR for Establishing Transmitter Drift Flagging Limit

In its application for a license or license amendment to incorporate OLM methods for establishing calibration surveillance intervals, applicants or licensees should describe whether they intend to adopt the criteria within the AMS OLM TR for flagging transmitter drift or whether they plan to use a different methodology for determining this limit.

Response to ASAI 5:

The NextEra OLM programs for Point Beach, Seabrook, St. Lucie, and Turkey Point adopt the two averaging techniques (i.e., simple average and parity space) described in Section 6 of the AMS OLM TR for flagging transmitter drift.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

- 10 CFR 50.36(c)(3), states, in part, that surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.
- 10 CFR 50.36(c)(5) states, in part, that administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.
- 10 CFR 50, Appendix A General Design Criterion (GDC) 13, "Instrumentation and Control, states that instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions as appropriate to assure adequate safety, including those variables and systems that can affect the fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems. Appropriate controls shall be provided to maintain these variables and systems within prescribed operating ranges
- 10 CFR 50, Appendix A GDC 21, "Protection System Reliability and Testability," states, in part, that plant protection systems be designed to permit periodic testing during reactor operation, including a capability to test channels independently to determine failures and losses of redundancy that may have occurred. *[Seabrook, St. Lucie applicable].*

(Note: Point Beach and Turkey Point were licensed to the 1967 Atomic Energy Commission Proposed General Design Criterion [1967 Proposed GDC] or equivalent, which predated 10 CFR 50, Appendix A.)

- 1967 Proposed GDC 13, states that means shall be provided for monitoring or otherwise measuring and maintaining control over the fission process throughout core life under all conditions that can reasonably be anticipated to cause variations in reactivity of the core. *[Turkey Point applicable]*
- 1967 Proposed GDC 19, "Protection Systems Reliability", states, in part, that protection systems shall be designed for high functional reliability and in-service testability necessary to avoid undue risk to the health and safety of the public. *[Turkey Point; Point Beach GDC equivalent applicable].*
- 1967 Proposed GDC 25, "Demonstration of functional Operability of Protection Systems", states, in part, that means shall be included for suitable testing of the active components of protection systems

while the reactor is in operation to determine if failure or loss of redundancy has occurred. *[Turkey Point; Point Beach GDC equivalent applicable].*

- IEEE Standard 279-1971, "Standard for Nuclear Plant Protection Systems", states, in part, that means shall be provided for checking, with a high degree of confidence, the operational availability of each system input sensor during reactor operation.
- IEEE Standard 338-1977, contains the following requirements related to calibration:
 - Channel Calibration Verification Tests. A channel calibration verification test should prove that with a known precise input, the channel gives the required output, analog, or bistable. Additionally, in analog channels, linearity and hysteresis may be checked. If the required output is achieved, the test is acceptable. If the required output is not achieved (for example, the bistable trip did not occur at the required set point or the analog output was out of tolerance) or saturation or fold-over is observed and adjustment or alignment of gain, bias, trip set, etc., is required, the test is unacceptable. Adjustment or alignment procedures are maintenance activities and are outside the scope of this standard. Test results, however, shall be recorded in accordance with ANSI/ANS 3.2-1982, or the equivalent. Following maintenance or other appropriate disposition of the unacceptable results, a successful rerun of the channel calibration verification test shall be performed.
 - Changes to Test Interval. The effect of testing intervals on performance of equipment shall be reevaluated periodically to determine if the interval used is an effective factor in maintaining equipment in an operational status. The following shall be considered:
 - History of equipment performance, particularly experienced failure rates and potential significant increases in failure rates.
 - Corrective action associated with failures.
 - Performance of equipment in similar plants or environment, or both.
 - Plant design changes associated with equipment.
 - Detection of significant changes of failure rates.
 - Test intervals may be changed to agree with plant operational modes provided it can be shown that such changes do not adversely affect desired performance of the equipment being tested. Tests need not be performed on systems or equipment when they are not required to be operable or are tripped. If tests are not conducted on such systems, they shall be performed prior to returning the system to operation.
- IEEE Standard 338-2012, contains the following requirements related to calibration:
 - On-line monitoring (OLM) techniques enable the determination of portions of an instrument channel's status during plant operation. This methodology is an acceptable input for establishing calibration frequency of those monitored portions of instrument channels without adversely affecting reliability.
 - Continuous monitoring shall be employed, e.g., through the plant computer. Periodic manual testing is either a maintenance or surveillance task and is not on-line monitoring. On-line monitoring shall ensure that setpoint calculation assumptions and the safety analysis assumptions remain valid.

4.2 Precedent

The proposed license amendment to implement an Online Monitoring (OLM) Program at the NextEra nuclear sites is based the NRC-approved Analysis and Measurement Services Corporation Topical Report

AMS-TR-0720R2, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (References 1 and 2). Two precedents are cited below.

- In response to a Southern Nuclear Operating Co., Inc., license amendment request, the NRC issued Amendments 218 and 210 for Vogtle Electric Generating Plant, Units 1 and 2, respectively, allowing the use of an online monitoring (OLM) methodology as the technical basis to switch from time-based to a condition-based channel calibration frequency (References 23 and 24).
- In response to a Southern Nuclear Operating Co., Inc., license amendment request, the NRC issued Amendments 252 and 249 for Joseph M. Farley Nuclear Plant, Units 1 and 2, respectively, and Amendments 325 and 270 for Edwin I. Hatch Nuclear Plant, Units 1 and 2, respectively, allowing the use of an online monitoring (OLM) methodology as the technical basis to switch from time-based to a condition-based channel calibration frequency (References 25 and 26).

4.3 No Significant Hazards Consideration Determination Analysis

NextEra requests amendments to Subsequent Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Plant, Units 3 and 4 (Turkey Point), Renewed Facility Operating Licenses (RFOLs) DPR-67 and NPF-16 for St. Lucie Nuclear Plant, Units 1 and 2 (St. Lucie), RFOLs DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2 (Point Beach), and RFOL NPF-86 for Seabrook Station Unit 1 (Seabrook). The proposed license amendments would modify the Technical Specifications (TS) to provide for an Online Monitoring Program in accordance with the Analysis and Measurement Services (AMS) topical report AMS-TR-0720R2-A (Reference 1). Specifically, the proposed change would facilitate the transition from time-based to condition-based calibrations for qualifying pressure, flow, and level transmitters based on accepted online monitoring (OLM) methods.

NextEra has evaluated the proposed changes to the Point Beach, Seabrook, St. Lucie, and Turkey Point Technical Specifications (TS) using the criteria in 10 CFR 50.92 and determined that the proposed changes do not involve a significant hazards consideration.

As required by 10 CFR 50.91(a), the NextEra analysis of the issue of no significant hazards consideration is presented below:

- (1) Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change uses online monitoring (OLM) methodology as the technical basis to switch from time-based surveillance frequency for channel calibrations to a condition-based calibration frequency based on OLM results. Switching from time-based surveillance frequency for channel calibrations to a condition-based calibration frequency will not create any physical changes to the plant. The use of the NRC-approved OLM methodology ensures that plant safety is maintained by demonstrating that transmitters are functioning correctly. The proposed changes do not adversely affect accident initiators or precursors, and do not alter the design assumptions, conditions, or configuration of the plant or the way the plant is operated or maintained.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (2) Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. Existing calibration methods will be used when the need for transmitter calibration is determined. The change does not alter assumptions made in the safety analysis but ensures that the transmitters operate as assumed in the accident analysis. The proposed change is consistent with the safety analysis assumptions.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

- (3) Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The change does not alter assumptions made in the safety analysis but ensures that the transmitters operate as assumed in the accident analysis. The proposed change is consistent with the safety analysis assumptions.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based upon the above, FPL concludes that the proposed license amendment does not involve a significant hazards consideration, under the standards set forth in 10 CFR 50.92, "Issuance of Amendment," and accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusions

In conclusion, based on the considerations discussed above, NextEra concludes: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20, and would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 REFERENCES

1. Analysis and Measurement Services Corporation letter to U.S. Nuclear Regulatory Commission, Submittal of -A Version of Analysis and Measurement Services Corporation Topical Report AMS-TR-0720R2, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters", August 20, 2021 (ADAMS Accession No. ML21235A493)
2. NRC Form 896, AMS Topical Report -A Verification, dated September 22, 2021 (ADAMS Accession No. ML21237A490)
3. AMS Report PTB2401R0, "OLM Amenable Transmitters Report for Point Beach Units 1 and 2"
4. AMS Report SBR2402R0, "OLM Amenable Transmitters Report for Seabrook Unit 1"
5. AMS Report STL2402R0, "OLM Amenable Transmitters Report for St. Lucie Units 1 and 2"
6. AMS Report TKP2401R0, "OLM Amenable Transmitters Report for Turkey Point Units 3 and 4"
7. AMS Report PTB2402R0, "OLM Analysis Methods and Limits Report for Point Beach Units 1 and 2"
8. AMS Report SBR2403R0, "OLM Analysis Methods and Limits Report for Seabrook Unit 1"
9. AMS Report STL2403R0, "OLM Analysis Methods and Limits Report for St. Lucie Units 1 and 2"
10. AMS Report TKP2402R0, "OLM Analysis Methods and Limits Report for Turkey Point Units 3 and 4"
11. AMS Report PTB2403R0, "OLM Drift Monitoring Program Report for Point Beach Units 1 and 2"
12. AMS Report SBR2404R0, "OLM Drift Monitoring Program Report for Seabrook Unit 1"
13. AMS Report STL2404R0, "OLM Drift Monitoring Program Report for St. Lucie Units 1 and 2"
14. AMS Report TKP2403R0, "OLM Drift Monitoring Program Report for Turkey Point Units 3 and 4"
15. AMS Procedure OLM2201, "Procedure for Online Monitoring Data Retrieval," December 2022
16. AMS Procedure OLM2202, "Procedure for Performing Online Monitoring Data Qualification and Analysis," August 2024
17. AMS Report PTB2404R0, "OLM Noise Analysis Program Report for Point Beach Units 1 and 2"
18. AMS Report SBR2405R0, "OLM Noise Analysis Program Report for Seabrook Unit 1"
19. AMS Report STL2405R0, "OLM Noise Analysis Program Report for St. Lucie Units 1 and 2"
20. AMS Report TKP2404R0, "OLM Noise Analysis Program Report for Turkey Point Units 3 and 4"
21. AMS Procedure NPS1501, "Procedure for Noise Data Collection from Plant Sensors," March 2015
22. AMS Procedure NAR2201, "Procedure for Performing Dynamic Failure Mode Assessment Using Noise Analysis," August 2024

23. Southern Nuclear Operating Company letter NL-22-0764 to NRC dated December 21, 2022, "License Amendment Request to Revise Technical Specification 1.1 and Add 5.5.23 to Use Online Monitoring Methodology," (ADAMS Accession No. ML22355A588)
24. NRC letter to Southern Nuclear Operating Company dated June 15, 2023, ""Vogtle Electric Generating Plant, Units 1 And 2 - Issuance of Amendments Regarding Revision to Technical Specifications to Use Online Monitoring Methodology,"" (ADAMS Accession No. ML23115A149)
25. Southern Nuclear Operating Company letter NL-22-0764 to NRC dated May 3, 2024, "Farley Nuclear Plant - Units 1&2 and Hatch Nuclear Plant - Units 1&2 License Amendment Request to Revise Technical Specification 1.1 and Add Online Monitoring Program to Technical Specification 5.5," (ADAMS Accession No. ML24124A133)
26. NRC letter to Southern Nuclear Operating Company dated January 24, 2025, "Joseph M. Farley Nuclear Plant, Units 1 and 2, and Edwin I. Hatch Nuclear Plant, Units 1 and 2 - Issuance of Amendments Regarding Revision to Technical Specifications to Use Online Monitoring Methodology," (ADAMS Accession No. ML24351A080)

L-2025-170
Enclosure 1

ATTACHMENT 1
Point Beach Technical Specifications Page Markups

(3 pages follow)

1.0 USE AND APPLICATION

1.1 Definitions

-----NOTE-----

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

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

INSERT:
(excluding transmitters in the
Online Monitoring Program)

5.5 Programs and Manuals

5.5.18 Control Room Envelope Habitability Program (continued)

- g. An adequate supply of self contained breathing apparatus (SCBA) units in the CRE to protect CRE occupants from a hazardous chemical release.
- h. Portable smoke ejection equipment per the Fire Protection Evaluation Report and Safe Shutdown Analysis Report to address a potential smoke challenge.

5.5.19 Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operations are met:

- a. The Surveillance Frequency Control Program shall contain a list of frequencies of those Surveillance Requirements for which the frequency is controlled by the program.
- b. Changes to the frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.
- c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the frequencies established in the Surveillance Frequency Control Program.





5.5.20 Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with the NRC approved methodology.
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.
 - 4) Documentation of the results of the online monitoring data analysis.
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.
- d. The provisions of Surveillance Requirement 3.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.

L-2025-170
Enclosure 1

ATTACHMENT 2
Point Beach Technical Specifications Bases Page Markups

(7 pages follow)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.1.10 is modified by two Notes as identified in Table 3.3.1-1. The first Note requires evaluation of channel performance for the condition where the as-found setting for the channel setpoint is outside its as-found tolerance but conservative with respect to the Allowable Value. Evaluation of channel performance will verify that the channel will continue to behave in accordance with safety analysis assumptions and the channel performance assumptions in the setpoint methodology. The purpose of the assessment is to ensure confidence in the channel performance prior to returning the channel to service. The performance of these channels will be evaluated under the station's Corrective Action Program. Entry into the Corrective Action Program will ensure required review and documentation of the condition to establish a reasonable expectation for continued OPERABILITY. The second Note requires that the as-left setting for the channel be returned to within the as-left tolerance of the NTSP. Where a setpoint more conservative than the

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 6) and TS 5.5.20, Online Monitoring Program.

SR 3.3.1.11

SR 3.3.1.11 is the performance of a CHANNEL CALIBRATION, as described in SR 3.3.1.10. This SR is modified by a Note stating that neutron detectors are excluded from the CHANNEL CALIBRATION. The CHANNEL CALIBRATION for the power range neutron detectors consists of a normalization of the detectors based on a power calorimetric and core power distribution information. The CHANNEL CALIBRATION for the source range and intermediate range neutron detectors consists of obtaining the detector plateau or preamp discriminator curves, evaluating those curves, and comparing the curves to the manufacturer's data. This Surveillance is not required for the NIS power range detectors for entry into MODE 2 or 1, and is not required for the NIS intermediate range detectors for entry into MODE 2, because the unit must be in at least MODE 2 to perform the test for the intermediate range detectors and MODE 1 for the power range detectors.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.1.14

SR 3.3.1.14 is the performance of a TADOT of Turbine Trip Functions. This TADOT is as described in SR 3.3.1.4, except that this test is performed prior to exceeding the P-9 interlock whenever the unit has been in MODE 3. This Surveillance is not required if it has been performed within the previous 31 days. Performance of this test will ensure that the turbine trip Function is OPERABLE prior to exceeding the P-9 interlock.

SR 3.3.1.15

SR 3.3.1.15 is the performance of an ACTUATION LOGIC TEST on the RCP Breaker Position (Two Loop), Reactor Coolant Flow-Low (Two Loop) and Underfrequency Bus A01 and A02 Trip Functions, and P-6, P-7, P-8, P-9 and P-10 Interlocks every 18 months.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Chapter 7.
2. FSAR, Chapter 14.
3. IEEE-279-1968.
4. 10 CFR 50.49.
5. 10 CFR 50.67

Insert:

6. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.2.7

SR 3.3.2.7 is the performance of a TADOT. This test is a check of the Manual Actuation Functions. **The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.**

SR 3.3.2.8

SR 3.3.2.8 is the performance of a CHANNEL CALIBRATION.

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

CHANNEL CALIBRATIONS must be performed consistent with the assumptions of the setpoint methodology. The difference between the current "as found" values and the previous test "as left" values must be consistent with the drift allowance used in the setpoint methodology.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

This SR is modified by a Note stating that this test should include verification that the time constants are adjusted to the prescribed values where applicable.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 6) and TS 5.5.20, Online Monitoring Program.

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.2.8 is modified by two Notes as identified in Table 3.3.2-1. The first Note requires evaluation of channel performance for the condition where the as-found setting for the channel setpoint is outside its as-found tolerance but conservative with respect to the Allowable Value. Evaluation of channel performance will verify that the channel will continue to behave in accordance with the safety analysis assumptions and the channel performance assumptions in the setpoint methodology. The purpose of the assessment is to ensure confidence in the channel performance prior to returning the channel to service. The performance of these channels will be evaluated under the station's Corrective Action Program. Entry into the Corrective Action Program will ensure required review and documentation of the condition to establish a reasonable expectation for continued OPERABILITY. The second Note requires that the as-left setting for the channel be returned to within the as-left tolerance of the NTSP. Where a setpoint more conservative than the NTSP is used in the plant surveillance procedures (field trip setpoint), the as-left and as-found tolerances, as applicable, will be applied to the surveillance procedure setpoint. This will ensure that sufficient margin to the Safety Limit and/or Analytical Limit is maintained. If the as-left tolerance of the NTSP, then the channel shall be declared inoperable. For Function 6.e, the NTSP is located in plant procedures.

The second Note also requires that the methodologies for calculating the as-left and as-found tolerances be in the FSAR Chapter 7 (Ref. 1).

REFERENCES

1. FSAR, Chapter 7.
2. FSAR, Chapter 14
3. IEEE-279-1968.
4. 10 CFR 50.49.
5. NUREG-1218, April 1988.

Insert:

6. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.3.2

CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to measured parameter with the necessary range and accuracy. This SR is modified by a Note that specifies the CHANNEL CALIBRATION of the Containment Area Radiation (High Range) detectors shall consist of a verification of a response to a source. Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION of the Core Exit thermocouple sensors is accomplished by an inplace cross calibration that compares the other sensing elements with the recently installed sensing element. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.3.3.3

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 5) and TS 5.5.20, Online Monitoring Program.

Frequency Control Program.

REFERENCES

1. NRC SER Letter, "Conformance to Regulatory Guide 1.97 for the Point Beach Nuclear Plant Units 1 and 2," July 11, 1986.
2. Regulatory Guide 1.97, Revision 2, December 1980.
3. NUREG-0737, Supplement 1, "TMI Action Items."
4. NRC SER Letter, "Point Beach Nuclear Power Plant, Units 1 and 2 – Emergency Response Capability – Conformance to Regulatory Guide 1.97, Revision 2", February 22, 2002.

Insert:

5. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

This clarifies what is an acceptable CHANNEL OPERATIONAL 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. The COT will verify the setpoint is within the PTLR allowed maximum limits in the PTLR. PORV actuation could depressurize the RCS and is not required.

SR 3.4.12.6

Performance of a CHANNEL CALIBRATION on each required PORV actuation channel is required to adjust the whole channel so that it responds and the valve opens within the required range and accuracy to known input. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program

SR 3.4.12.7 and SR 3.4.12.8

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 9) and TS 5.5.20, Online Monitoring Program.

REFERENCES

1. 10 CFR 50, Appendix G.

2. Generic Letter 88-11.

Insert:

9. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

6. 10 CFR 50, Appendix K.

7. Generic Letter 90-06.

8. Engineering Evaluation 2001-0037, Rev 0, 12/13/01, Evaluation of Unbolted Head as an RCS vent path.

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.4.15.1

SR 3.4.15.1 requires the performance of a CHANNEL CHECK of the required containment atmosphere radioactivity monitor. The check gives reasonable confidence that the channel is operating properly. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.4.15.2 and SR 3.4.15.3

These SRs require the performance of a CHANNEL CALIBRATION for each of the RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR Section 1.3.3.
2. FSAR, Section 6.5.

Insert:

3. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 3) and TS 5.5.20, Online Monitoring Program.

L-2025-170
Enclosure 1

ATTACHMENT 3
Seabrook Technical Specifications Page Markups

(5 pages follow)

1.0 DEFINITIONS

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

ACTION

1.1 ACTION shall be that part of a Technical Specification which prescribes remedial measures required under designated conditions.

ACTUATION LOGIC TEST

1.2 An ACTUATION LOGIC TEST shall be the application of various simulated input combinations in conjunction with each possible interlock logic state and verification of the required logic output. The ACTUATION LOGIC TEST shall include a continuity check, as a minimum, of output devices.

ANALOG CHANNEL OPERATIONAL TEST

1.3 An ANALOG CHANNEL OPERATIONAL TEST shall be the injection of a simulated signal into the channel as close to the sensor as practicable to verify OPERABILITY of alarm, interlock and/or trip functions. The ANALOG CHANNEL OPERATIONAL TEST shall include adjustments, as necessary, of the alarm, interlock and/or Trip Setpoints such that the Setpoints are within the required range and accuracy. The ANALOG CHANNEL OPERATIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

AXIAL FLUX DIFFERENCE

1.4 AXIAL FLUX DIFFERENCE shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.

CHANNEL CALIBRATION

1.5 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel such that it responds within the required range and accuracy to known values of input. The CHANNEL CALIBRATION shall encompass the entire channel including the sensors and alarm, interlock and/or trip functions. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program from the devices included in the step.

CHANNEL CHECK

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

INSERT:
(excluding transmitters in the
Online Monitoring Program)

DEFINITIONS

DOSE EQUIVALENT I-131

1.12 DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microCurie/gram) which alone would produce the same TEDE dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed under inhalation in Federal Guidance Report No. 11 (FGR 11), "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion and Ingestion," 1989.

$\bar{E}$ - AVERAGE DISINTEGRATION ENERGY

1.13 $\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the sample) of the sum of the average beta and gamma energies per disintegration (MeV/d) for the radionuclides in the sample with half-lives greater than 10 minutes.

ENGINEERED SAFETY FEATURES (ESF) RESPONSE TIME

1.14 The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

FREQUENCY NOTATION

1.15 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.1.

INSERT:
(including transmitters in the
Online Monitoring Program)

GASEOUS RADWASTE TREATMENT SYSTEM

1.16 A GASEOUS RADWASTE TREATMENT SYSTEM shall be any system designed and installed to reduce radioactive gaseous effluents by collecting Reactor Coolant System offgases from the Reactor Coolant System and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.

IDENTIFIED LEAKAGE

1.17 IDENTIFIED LEAKAGE shall be:

- a. Leakage (except CONTROLLED LEAKAGE) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank, or

DEFINITIONS

PHYSICS TESTS

1.23 PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation: (1) described in Chapter 14.0 of the FSAR, (2) authorized under the provisions of 10 CFR 50.59, or (3) otherwise approved by the Commission.

PRESSURE BOUNDARY LEAKAGE

1.24 PRESSURE BOUNDARY LEAKAGE shall be leakage (except primary to secondary leakage) through a nonisolable fault in a Reactor Coolant System component body, pipe wall, or vessel wall.

PROCESS CONTROL PROGRAM

1.25 The PROCESS CONTROL PROGRAM (PCP) shall contain the current formulas, sampling, analyses, tests, and determinations to be made to ensure that processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71, State Regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste.

PURGE - PURGING

1.26 PURGE or PURGING shall be any controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

QUADRANT POWER TILT RATIO

1.27 QUADRANT POWER TILT RATIO shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater. With one excore detector inoperable, the remaining three detectors shall be used for computing the average.

RATED THERMAL POWER

1.28 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 3648 Mwt.

REACTOR TRIP SYSTEM (RTS) RESPONSE TIME

1.29 The RTS RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS Trip Setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

INSERT:
(including transmitters in the
Online Monitoring Program)

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS

6.7.6 (Continued)

- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate ACTIONS of the LCO in which the loss of safety function exists are required to be entered. When a loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate ACTIONS to enter are those of the support system.

6.8 REPORTING REQUIREMENTS

**INSERT:
New TS 6.7.6.q here**

ROUTINE REPORTS

6.8.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Regional Administrator of the Regional Office of the NRC unless otherwise noted.

STARTUP REPORT

6.8.1.1 A summary report of station startup and power escalation testing shall be submitted following: (1) receipt of an Operating License, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the station.

The Startup Report shall address each of the tests identified in the Final Safety Analysis Report and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

Startup Reports shall be submitted within: (1) 90 days following completion of the Startup Test Program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of Startup Test Program, and resumption or commencement of commercial operation), supplementary reports shall be submitted at least every 3 months until all three events have been completed.



q. Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with the NRC approved methodology.
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.
 - 4) Documentation of the results of the online monitoring data analysis.
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.
- d. The provisions of Surveillance Requirement 4.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.

L-2025-170
Enclosure 1

ATTACHMENT 4
Seabrook Technical Specifications Bases Page Markups

(6 pages follow)

POWER DISTRIBUTION LIMITS

BASES

3/4.2.5 DNB PARAMETERS

The limits on the DNB-related parameters assure that each of the parameters is maintained within the normal steady-state envelope of operation assumed in the transient and accident analyses. The limits are consistent with the updated FSAR assumptions and have been analytically demonstrated adequate to assure compliance with acceptance criteria for each analyzed transient. Operating procedures include allowances for measurement and indication uncertainty so that the limits specified in the COLR for T_{avg} and for pressurizer pressure are not exceeded.

The periodic surveillance of these parameters through instrument readout is sufficient to ensure that the parameters are restored within their limits following load changes and other expected transient operation. The surveillance frequency is controlled under the Surveillance Frequency Control Program.

The periodic surveillance of indicated RCS flow is sufficient to detect only flow degradation which could lead to operation outside the specified limit. The surveillance frequency is controlled under the Surveillance Frequency Control Program.

RCS flow must be greater than or equal to, 1) the Thermal Design Flow (TDF) with an allowance for measurement uncertainty and, 2) the minimum measured flow used in place of the TDF in the analysis of the DNB related events when the Revised Thermal Design Procedure (RTDP) methodology is utilized. Measurement of RCS total flow rate is performed by performance of either a precision calorimetric heat balance or normalized cold leg elbow tap ΔP measurements. RCS flow measurements using either the precision heat balance or the elbow tap ΔP measurement methods are to be performed at steady state conditions prior to operation above 95% rated thermal power (RTP) at the beginning of a new fuel cycle. The elbow tap RCS flow measurement methodology is described in WCAP-15404, "Justification of Elbow Taps for RCS Flow Verification at Seabrook Station", dated April 2000.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters," and TS 6.7.6.q, Online Monitoring Program.

3/4.3 INSTRUMENTATION

BASES

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

The OPERABILITY of the Reactor Trip System and the Engineered Safety Features Actuation System instrumentation and interlocks ensures that: (1) the associated ACTION and/or Reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its Setpoint (2) the specified coincidence logic is maintained, (3) sufficient redundancy is maintained to permit a channel to be out-of-service for testing or maintenance, and (4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the safety analyses. The Surveillance Requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed in accordance with the Surveillance Frequency Control Program are sufficient to demonstrate this capability.

Table 3.3-1 contains the action statements for inoperable Reactor Trip System Instrumentation. Actions 4 and 5, associated with the source range neutron flux instruments, each include a requirement to suspend operations involving positive reactivity changes.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters," and TS 6.7.6.q, Online Monitoring Program.

action Completion Time to 72 hours for the analog inputs into the Reactor Trip and ESFAS actuation systems. In addition WCAP-15376 extended the bypass time to 4 hours and the Completion Time to 24 hours for actions related to Reactor Trip breakers, Reactor Trip logic, and ESFAS Actuation logic.

For analog channel surveillance testing, the 12-hour bypass time is separate from the action Completion Time of 72 hours. The Completion Time of 72 hours begins either when the 12 hours of bypass time ends, or when the channel is discovered to be INOPERABLE.

INSTRUMENTATION

BASES

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (continued)

WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in WCAP-13632-P-A, Revision 2. ~~Response time verification for other sensor types not covered by WCAP-13632-P-A, Revision 2, must be demonstrated by test.~~

In consideration of other response time test procedures used at Seabrook Station the Resistance Temperature Detectors (RTDs) are not encompassed by this analysis as presented and will continue to be periodically tested.

For those sensors covered by WCAP-13632-P-A, Revision 2, the following actions must be implemented:

Insert:

Alternately, the use of the allocated response time for transmitters in the Online Monitoring Program is supported by the performance of online monitoring using the 'noise analysis' technique implemented in accordance with AMS-TR-0720R2-A to detect dynamic failures modes that can affect transmitter response time. Response time verification for other sensor types not covered by WCAP-13632-P-A, Revision 2, or AMS-TR-0720R2-A must be demonstrated by test.

new

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- (c) If variable damping is used*, a method to assure that the potentiometer is at the required setting and cannot be inadvertently changed must be implemented, or a hydraulic response time test of the sensor must be performed following each calibration; and

* Seabrook Station currently has no pressure transmitters with variable damping installed in any RPS or ESFAS application for which RTT is required; therefore, no Seabrook Station procedure changes or enhanced administrative controls are required. If in the future, a pressure transmitter with variable damping capability is used, then either procedure changes will be implemented and/or appropriate administrative controls will be established to assure the variable damping potentiometer cannot be inadvertently changed. Examples of such administrative controls may include use of pressure transmitters that are factory set and hermetically sealed to prohibit tampering or in situ application of a tamper seal (or sealant) on the potentiometer to secure and give a visual indication of the potentiometer position.

INSTRUMENTATION

BASES

MONITORING INSTRUMENTATION

3/4.3.3.1 RADIATION MONITORING FOR PLANT OPERATIONS (Continued)

and abnormal conditions. Once the required logic combination is completed, the system sends actuation signals to initiate alarms or automatic isolation action and actuation of Emergency Exhaust or Ventilation Systems.

3/4.3.3.2 (THIS SPECIFICATION NUMBER IS NOT USED)

3/4.3.3.3 (THIS SPECIFICATION NUMBER IS NOT USED)

3/4.3.3.4 (THIS SPECIFICATION NUMBER IS NOT USED)

3/4.3.3.5 REMOTE SHUTDOWN SYSTEM

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters," and TS 6.7.6.q, Online Monitoring Program.

preclude achieving safe shutdown. The Remote Shutdown System instrumentation, control, and power circuits and transfer switches necessary to eliminate effects of the fire and allow operation of instrumentation, control and power circuits required to achieve and maintain a safe shutdown condition are independent of areas where a fire could damage systems normally used to shut down the reactor. This capability is consistent with General Design Criterion 3 and Appendix R to 10CFR Part 50.

The Technical Specifications (T/S) require surveillance testing of selected equipment used for safe shutdown from outside the control room at Remote Safe Shutdown (RSS) locations. The surveillance frequency is controlled under the Surveillance Frequency Control Program. The required equipment is listed in Table 3.3-9. The selection criteria for the Transfer Switch/Control Circuit portion of the table is the primary equipment which has remote/local selector switches and is required to perform the reactor coolant system inventory and pressure control, reactivity control, and decay heat removal functions to achieve and maintain hot standby. Redundant, safety grade equipment is provided for GDC 19 shutdown. For Appendix R shutdown, only one train of equipment (safety or non-safety related) is required; redundancy is not a requirement. Therefore, some equipment in Table 3.3-9 is required for a GDC 19 shutdown but not for a GDC 3/Appendix R shutdown. Seabrook is a hot standby safe shutdown design basis plant (see UFSAR Section 5.4.7.2.i). Support equipment, and equipment required only to achieve and maintain cold shutdown, are not required to be included in the T/S table.

INSTRUMENTATION

BASES

3/4.3.3.6 ACCIDENT MONITORING INSTRUMENTATION (Continued)

ACTION:

- b. Action b. applies when an instrument has less than the required minimum number of operable channels. The 7-day AOT is based on the relatively low probability of an event requiring PAM instrumentation and the availability of alternate means (non-Regulatory Guide 1.97 instruments) to monitor the parameter. Continuous operation with less than the minimum required channels is not acceptable because alternate indication may not fully meet the performance qualifications applied to PAM instrumentation.
- c. Action c. applies to the containment post-LOCA high range area radiation monitor when less than the minimum required channels are operable. Seventy-two hours is permitted to initiate the alternate method of monitoring for the post-LOCA monitor. If the monitor is not restored to operable status within the 7-day AOT, a report that discusses the actions taken, the cause of the inoperability, and the plans and schedule for restoring the instruments to operable status must be submitted to the NRC within 14 days.

3/4.3.3.7 (THIS SPECIFICATION NUMBER IS NOT USED)

3/4.3.3.8 (THIS SPECIFICATION NUMBER IS NOT USED)

Insert:

The Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters," and TS 6.7.6.q, Online Monitoring Program.

3/4.3.3.10 EXPLOSIVE GAS MONITORING INSTRUMENTATION

The explosive gas instrumentation is provided to monitor and control, the concentrations of potentially explosive gas mixtures in the WASTE GAS HOLDUP SYSTEM. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

3/4.3.4 (THIS SPECIFICATION NUMBER IS NOT USED)

REACTOR COOLANT SYSTEM

BASES

REACTOR COOLANT SYSTEM LEAKAGE

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

3/4.4.6.1 LEAKAGE DETECTION SYSTEMS

ACTIONS (c) (Continued)

Insert:

4. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

It is sufficient to detect increasing RCS leakage. The days to interval ensures lengthable

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 4) and TS 6.7.6.q, Online Monitoring Program.

TS

SR 4.4.6.1.a.1

SR 4.4.6.1.a.1 requires the performance of a CHANNEL CHECK of the required containment atmosphere radioactivity monitor. The check gives reasonable confidence that the channel is operating properly. The surveillance frequency is controlled under the Surveillance Frequency Control Program.

SR 4.4.6.1.a.2

SR 4.4.6.1.a.2 requires the performance of a digital channel operational test on the required containment atmosphere radioactivity monitor. The test ensures that the monitor can perform its function in the desired manner. The test verifies the alarm setpoint and relative accuracy of the instrument string. The surveillance frequency is controlled under the Surveillance Frequency Control Program.

SR 4.4.6.1.a.3 and 4.4.6.1.b

These SRs require the performance of a channel calibration for each of the RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment. The surveillance frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. 10 CFR 50, Appendix A, Section IV, GDC 30.
2. Regulatory Guide 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973.
3. FSAR, Section 5.2.5.

L-2025-170
Enclosure 1

ATTACHMENT 5

St. Lucie Unit 1 Technical Specifications Page Markups
St. Lucie Unit 2 Technical Specifications Page Markups

(10 pages follow)

1.0 USE AND APPLICATION

1.1 Definitions

NOTE

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

<u>Term</u>	<u>Definition</u>
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
AXIAL SHAPE INDEX (ASI)	ASI shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core. $ASI = (LOWER - UPPER) / (LOWER + UPPER)$
AZIMUTHAL POWER TILT (T_q)	AZIMUTHAL POWER TILT shall be the maximum of the difference between the power generated in any core quadrant (upper or lower) (P_{quad}) and the average power of all quadrants (P_{avg}) in that half (upper or lower) of the core, divided by the average power of all quadrants in that half (upper or lower) of the core. $T_q = \text{Max } (P_{quad} - P_{avg}) / P_{avg} $
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

INSERT:
(excluding transmitters in the
Online Monitoring Program)

1.1 Definitions

DOSE EQUIVALENT XE-133 (continued)

air submersion listed in Table III.1 of EPA Federal Guidance Report No. 12, 1993, "External Exposure to Radionuclides in Air, Water, and Soil."

ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME

The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

INSERVICE TESTING PROGRAM

The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank;
2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems; or
3. Reactor Coolant System (RCS) LEAKAGE through a steam generator to the Secondary System (primary to secondary LEAKAGE);



INSERT:
**(including transmitters in the
Online Monitoring Program)**

1.1 Definitions

REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power to the CEAs drive mechanism is interrupted. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all CEAs (shutdown and regulating) are fully inserted except for the single CEA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all CEAs verified fully inserted by two independent means, it is not necessary to account for a stuck CEA in the SDM calculation. With any CEAs not capable of being fully inserted, the reactivity worth of these CEAs must be accounted for in the determination of SDM.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

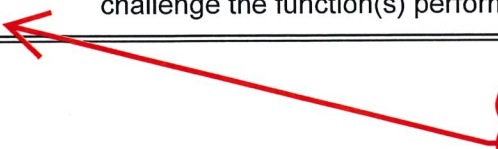
INSERT:
(including transmitters in the
Online Monitoring Program)

5.5 Programs and Manuals

5.5.17 Risk Informed Completion Time Program

This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09-A, Revision 0, "Risk-Managed Technical Specifications (RMTS) Guidelines." The program shall include the following:

- a. The RICT may not exceed 30 days;
- b. A RICT may only be utilized in MODES 1 and 2;
- c. When a RICT is being used, any change to the plant configuration within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. Use of a RICT is not permitted for entry into a configuration which represents a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE.
- e. If the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
 1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
 2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.



INSERT:
New TS 5.5.18 here



5.5.18 Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with the NRC approved methodology.
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.
 - 4) Documentation of the results of the online monitoring data analysis.
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.
- d. The provisions of Surveillance Requirement 3.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.

1.0 USE AND APPLICATION

1.1 Definitions

NOTE

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

<u>Term</u>	<u>Definition</u>
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
AXIAL SHAPE INDEX (ASI)	ASI shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core. $ASI = (LOWER - UPPER) / (LOWER + UPPER)$
AZIMUTHAL POWER TILT (T_q)	AZIMUTHAL POWER TILT shall be the maximum of the difference between the power generated in any core quadrant (upper or lower) (P_{quad}) and the average power of all quadrants (P_{avg}) in that half (upper or lower) of the core, divided by the average power of all quadrants in that half (upper or lower) of the core. $T_q = \text{Max } (P_{quad} - P_{avg}) / P_{avg} $
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

INSERT:
(excluding transmitters in the
Online Monitoring Program)

1.1 Definitions

DOSE EQUIVALENT XE-133 (continued)

air submersion listed in Table III.1 of EPA Federal Guidance Report No. 12, 1993, "External Exposure to Radionuclides in Air, Water, and Soil."

ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME

The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

INSERVICE TESTING PROGRAM

The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

**INSERT:
(including transmitters in the
Online Monitoring Program)**

1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank;
2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems; or
3. Reactor Coolant System (RCS) LEAKAGE through a steam generator to the Secondary System (primary to secondary LEAKAGE);

1.1 Definitions

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3020 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power to the CEAs drive mechanism is interrupted. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all CEAs (shutdown and regulating) are fully inserted except for the single CEA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all CEAs verified fully inserted by two independent means, it is not necessary to account for a stuck CEA in the SDM calculation. With any CEAs not capable of being fully inserted, the reactivity worth of these CEAs must be accounted for in the determination of SDM.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

INSERT:
(including transmitters in the
Online Monitoring Program)

5.5 Programs and Manuals

5.5.17 Risk Informed Completion Time Program (continued)

- e. If the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
 - 1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
 - 2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.
-



**INSERT:
New TS 5.5.18 here**



5.5.18

Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with the NRC approved methodology.
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.
 - 4) Documentation of the results of the online monitoring data analysis.
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.
- d. The provisions of Surveillance Requirement 3.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.

L-2025-170
Enclosure 1

ATTACHMENT 6

St. Lucie Unit 1 Technical Specifications Bases Page Markups
St. Lucie Unit 2 Technical Specifications Bases Page Markups

(21 pages follow)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.1.8

SR 3.3.1.8 is the performance of a CHANNEL CALIBRATION.

CHANNEL CALIBRATION is a complete check of the instrument channel including the sensor. The Surveillance verifies that the channel responds to a measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drift between successive calibrations to ensure that the channel remains operational between successive tests. CHANNEL CALIBRATIONS must be performed consistent with the plant specific setpoint analysis.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

The Surveillance is modified by a Note to indicate that the neutron detectors are excluded from CHANNEL CALIBRATION because they are passive devices with minimal drift and because of the difficulty of simulating a meaningful signal. Slow changes in detector sensitivity are compensated for by performing the calorimetric calibration (SR 3.3.1.2) and the linear subchannel gain check (SR 3.3.1.3).

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 11) and TS 5.5.18, Online Monitoring Program.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

Testing may be performed in one measurement or in overlapping segments, with verification that all components are tested.

Response time may be verified by any series of sequential, overlapping or total channel measurements, including allocated sensor response time, such that the response time is verified. Allocations for sensor response times may be obtained from records of test results, vendor test data, or vendor engineering specifications. Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements,"

BASES

SURVEILLANCE REQUIREMENTS (continued)

Insert:

Alternately, the use of the allocated RPS RESPONSE TIME for transmitters in the Online Monitoring Program is supported by the performance of online monitoring using the 'noise analysis' technique to detect dynamic failures modes that can affect transmitter response time.

Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing," (Ref. 10). Response time verification for other sensor types must be demonstrated by test. The allocation of sensor response times must be verified prior to placing a new component in operation and reverified after maintenance that may adversely affect the sensor response time.

A Note is added to indicate that the neutron detectors are excluded from RPS RESPONSE TIME testing because they are passive devices with minimal drift and because of the difficulty of simulating a meaningful signal. Slow changes in detector sensitivity are compensated for by performing the calorimetric calibration (SR 3.3.1.2).

REFERENCES

1. Regulatory Guide 1.105, Revision 3, "Setpoints for Safety-Related Instrumentation."
2. 10 CFR 50, Appendix A, GDC 2.
3. 10 CFR 50.67.
4. IEEE Standard 279-1971, April 1972.
5. UFSAR, Chapter 15.
6. 10 CFR 50.49.
7. IC-3.17, "Instrument Setpoint Methodology for Nuclear Power Plants."
8. UFSAR, Section 7.2.
9. CEOG Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements."
10. Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing."

Insert:

11. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

Once the bypasses are removed, the bypasses must not fail in such a way that the associated ESFAS Function is inappropriately bypassed. This feature is verified by the appropriate ESFAS Function CHANNEL FUNCTIONAL TEST

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 12) and TS 5.5.18, Online Monitoring Program.

SR 3.3.3.4

CHANNEL CALIBRATION is a complete check of the instrument channel, including the sensor. The Surveillance verifies that the channel responds to a measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drift between successive calibrations to ensure that the channel remains operational between successive surveillances. CHANNEL CALIBRATIONS must be performed consistent with the plant specific setpoint analysis.

The as-found and as-left values must also be recorded and reviewed for consistency with the assumptions of the extension analysis. The requirements for this review are outlined in Reference 9.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.3.3.5

This Surveillance ensures that the train actuation response times are the maximum values assumed in the safety analyses. Individual component response times are not modeled in the analyses. The analysis models the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor to the point at which the equipment in both trains reaches the required functional state (e.g., pumps at rated discharge pressure, valves in full open or closed position). Response time testing acceptance criteria are included in Reference 5. The test may be performed in one measurement or in overlapping segments, with verification that all components are measured.

BASES

SURVEILLANCE REQUIREMENTS (continued)

Response time may be verified by any series of sequential, overlapping or total channel measurements, including allocated sensor response time, such that the response time is verified. Allocations for sensor response times may be obtained from records of test results, vendor test data, or vendor engineering specifications. Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements," (Ref. 10) provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the Topical Report. The response time may be verified for components that replace the components that were previously evaluated in Ref. 10 provided that the components have been evaluated in accordance with the NRC approved methodology as discussed in Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing," (Ref. 11). Response time verification for other sensor types must be demonstrated by test. The allocation of sensor response times must be verified prior to placing a new component in operation and reverified after maintenance that may be adversely affect the sensor response time.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. Regulatory Guide 1,105, "Setpoints for Safety-Related Instrumentation," Revision 3.

2. 10 CFR 50, Appendix A

Insert:

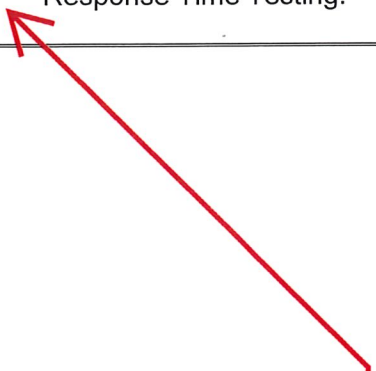
Alternately, the use of the allocated ESF RESPONSE TIME for transmitters in the Online Monitoring Program is supported by the performance of online monitoring using the 'noise analysis' technique to detect dynamic failures modes that can affect transmitter response time.

6. UFSAR, Chapter 15.
7. 10 CFR 50.49.
8. IC-3.17, "FPL Setpoint Standard."
9. CEN-327, May 1986 including Supplement 1, January 1989.

BASES

REFERENCES (continued)

10. CEOG Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements."
11. Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing."



Insert:

12. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.9.2

A CHANNEL CALIBRATION is a complete check of the instrument channel including the sensor. The Surveillance verifies the channel responds to the measured parameter within the necessary range and accuracy. A Note allows exclusion of neutron detectors from the CHANNEL CALIBRATION.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 5) and TS 5.5.18, Online Monitoring Program.

Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION of the resistance temperature detectors (RTD) sensors is accomplished by an inplace cross calibration that compares the other sensing elements with the recently installed sensing element.

Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION of the Core Exit thermocouple sensors is accomplished by an inplace cross calibration that compares the other sensing elements with the recently installed sensing element.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. St. Lucie Unit No. 1 Engineering Evaluation of Instrumentation System for Regulatory Guide 1.97, Rev. 3 (ML17216A336).
2. Regulatory Guide 1.97, Rev. 3.
3. NUREG-0737, Supplement 1.
4. NRC Safety Evaluation Report (SER)

Insert:

5. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION of the resistance temperature detectors (RTD) sensors is accomplished by an in-place cross calibration that compares the other sensing elements with the recently installed sensing element.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

The SR is modified by a Note, which excludes neutron detectors from the CHANNEL CALIBRATION.

SR 3.3.10.3

SR 3.3.10.3 is the performance of a CHANNEL FUNCTIONAL TEST. 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. This Surveillance should verify the OPERABILITY of the reactor trip circuit breaker (RTCB) open/closed indication by actuating the RTCBs.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 19.
 2. NRC Safety Evaluation Report (SER).
-

Insert:

3. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 3) and TS 5.5.18, Online Monitoring Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

block valve can be closed in the event the PORV develops excessive leakage or does not close (sticks open) after relieving an overpressure event.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 7) and TS 5.5.18, Online Monitoring Program.

FUNCTIONAL TEST will verify on a monthly basis that the PORV lift setpoints are within the LCO limit. 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. PORV actuation could depressurize the RCS and is not required.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.4.12.6

Performance of a CHANNEL CALIBRATION on each required PORV actuation channel is required to adjust the whole channel so that it responds and the valve opens within the required LTOP range and with accuracy to known input.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

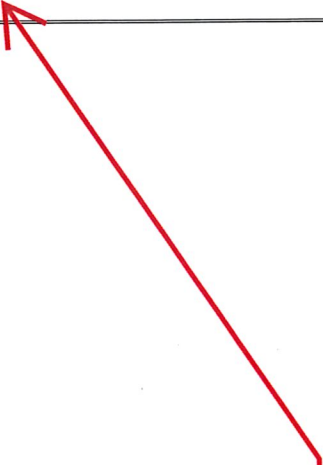
REFERENCES

1. 10 CFR 50, Appendix G.
2. Generic Letter 88-11.
3. WCAP-17197-NP, "St. Lucie Unit 1 RCS Pressure and Temperature Limits and Low-Temperature Overpressure Protection Report for 54 Effective Full Power Years," Revision 1, January 2021.

BASES

REFERENCES (continued)

4. 10 CFR 50.46.
 5. 10 CFR 50, Appendix K.
 6. Generic Letter 90-06.
-



Insert:

7. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.4.15.3 and SR 3.4.15.4

These SRs require the performance of a CHANNEL CALIBRATION for each of the RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. 10 CFR 50, Appendix A, Section IV, GDC 30.
 2. Regulatory Guide 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973.
 3. UFSAR, Section 5.2.4.
-

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 4) and TS 5.5.18, Online Monitoring Program.

Insert:

4. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.1.7

SR 3.3.1.7 is a CHANNEL FUNCTIONAL TEST similar to SR 3.3.1.4, except SR 3.3.1.7 is applicable only to bypass Functions and is performed once within 92 days prior to each startup. 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. Proper operation of bypass permissives is critical during plant startup because the bypasses must be in place to allow startup operation and must be removed at the appropriate points during power ascent to enable certain reactor trips. Consequently, the appropriate time to verify bypass removal function OPERABILITY is just prior to startup. The allowance to conduct this test within 92 days of startup is based on the reliability analysis presented in topical report CEN-327, "RPS/ESFAS Extended Test Interval Evaluation" (Ref. 9). Once the operating bypasses are removed, the bypasses must not fail in such a way that the associated trip Function gets inadvertently bypassed. This feature is

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 12) and TS 5.5.18, Online Monitoring Program.

SR 3.3.1.8 is the performance of a CHANNEL CALIBRATION.

CHANNEL CALIBRATION is a complete check of the instrument channel including the sensor. The Surveillance verifies that the channel responds to a measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drift between successive calibrations to ensure that the channel remains operational between successive tests. CHANNEL CALIBRATIONS must be performed consistent with the plant specific setpoint analysis.

The as-found and as-left values must also be recorded and reviewed for consistency with the assumptions of the frequency extension analysis. The requirements for this review are outlined in Reference 9.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

The Surveillance is modified by a Note to indicate that the neutron detectors are excluded from CHANNEL CALIBRATION because they are passive devices with minimal drift and because of the difficulty of simulating a meaningful signal. Slow changes in detector sensitivity are compensated for by performing the calorimetric calibration (SR 3.3.1.2) and the linear subchannel gain check (SR 3.3.1.3).

SR 3.3.1.9

This SR ensures that the RPS RESPONSE TIMES are verified to be less than or equal to the maximum values assumed in the safety analysis. Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time from the point at which the parameter exceeds the trip setpoint value at the sensor to the

Insert:

Alternately, the use of the allocated RPS RESPONSE TIME for transmitters in the Online Monitoring Program is supported by the performance of online monitoring using the 'noise analysis' technique to detect dynamic failures modes that can affect transmitter response time.

Response time may be verified by any series of sequential, overlapping or total channel measurements, including allocated sensor response time, such that the response time is verified. Allocations for sensor response times may be obtained from records of test results, vendor test data, or vendor engineering specifications. Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements," (Ref. 10) provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the Topical Report. The response time may be verified for components that replace the components that were previously evaluated in Ref. 10 provided that the components have been evaluated in accordance with the NRC approved methodology as discussed in Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing," (Ref. 11). Response time verification for other sensor types must be demonstrated by test. The allocation of sensor response times must be verified prior to placing a new component in operation and reverified after maintenance that may adversely affect the sensor response time.

BASES

SURVEILLANCE REQUIREMENTS (continued)

A Note is added to indicate that the neutron detectors are excluded from RPS RESPONSE TIME testing because they are passive devices with minimal drift and because of the difficulty of simulating a meaningful signal. Slow changes in detector sensitivity are compensated for by performing the calorimetric calibration (SR 3.3.1.2).

REFERENCES

1. Regulatory Guide 1.105, Revision 3, "Setpoints for Safety-Related Instrumentation."
2. 10 CFR 50, Appendix A, GDC 21.
3. 10 CFR 50.67.
4. IEEE Standard 279-19
5. UFSAR, Chapter 15.
6. 10 CFR 50.49.
7. IC-3.17, "Instrument Setpoint Methodology for Nuclear Power Plants."
8. UFSAR, Section 7.2.
9. CEN-327, May 1986, including Supplement 1, January 1989.
10. CEOG Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements."
11. Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing."

Insert:

12. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.3.3

SR 3.3.3.3 is a CHANNEL FUNCTIONAL TEST similar to SR 3.3.3.2, except 3.3.3.3 is only applicable to bypass Functions. These include the Pressurizer Pressure - Low bypass and the MSIS Steam Generator Pressure – Low bypass. 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.

The CHANNEL FUNCTIONAL TEST for proper operation of the bypass removal Functions is critical during plant heatups because the bypasses may be in place prior to entering MODE 3 but must be removed at the appropriate points during plant startup to enable ESFAS Function. Once the bypasses are removed, the bypasses must not fail in such a way that the associated ESFAS Function is inappropriately bypassed. This feature is verified by the appropriate ESFAS Function CHANNEL FUNCTIONAL TEST.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 12) and TS 5.5.18, Online Monitoring Program.

SR 3.3.3.4

CHANNEL CALIBRATION is a complete check of the instrument channel, including the sensor. The Surveillance verifies that the channel responds to a measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drift between successive calibrations to ensure that the channel remains operational between successive surveillances. CHANNEL CALIBRATIONS must be performed consistent with the plant specific setpoint analysis.

The as-found and as-left values must also be recorded and reviewed for consistency with the assumptions of the extension analysis. The requirements for this review are outlined in Reference 9.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.3.5

This Surveillance ensures that the train actuation response times are the maximum values assumed in the safety analyses. Individual component

Insert:

Alternately, the use of the allocated ESF RESPONSE TIME for transmitters in the Online Monitoring Program is supported by the performance of online monitoring using the 'noise analysis' technique to detect dynamic failures modes that can affect transmitter response time.

Response time may be verified by any series of sequential, overlapping or total channel measurements, including allocated sensor response time, such that the response time is verified. Allocations for sensor response times may be obtained from records of test results, vendor test data, or vendor engineering specifications. Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements," (Ref. 10) provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the Topical Report. The response time may be verified for components that replace the components that were previously evaluated in Ref. 10 provided that the components have been evaluated in accordance with the NRC approved methodology as discussed in Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing," (Ref. 11). Response time verification for other sensor types must be demonstrated by test. The allocation of sensor response times must be verified prior to placing a new component in operation and reverified after maintenance that may adversely affect the sensor response time.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

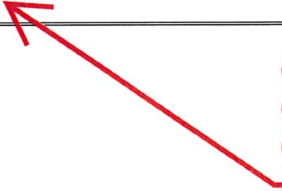
REFERENCES

1. Regulatory Guide 1.105, "Setpoints for Safety-Related Instrumentation," Revision 3.
2. 10 CFR 50, Appendix A.
3. 10 CFR 50.67.
4. UFSAR, Section 7.3.

BASES

REFERENCES (continued)

5. IEEE Standard 279-1971.
6. UFSAR, Chapter 15.
7. 10 CFR 50.49.
8. IC-3.17, FPL Setpoint Standard.
9. CEN-327, May 1986, including Supplement 1, January, 1989.
10. CEOG Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements."
11. Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing."



Insert:

12. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

verify that they are off scale in the same direction. Off scale low current loop channels are verified to be reading at the bottom of the range and not failed downscale.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.3.9.2

A CHANNEL CALIBRATION is a complete check of the instrument channel including the sensor. The Surveillance verifies the channel responds to the measured parameter within the necessary range and accuracy. A Note allows exclusion of neutron detectors from the CHANNEL CALIBRATION.

CHANNEL CALIBRATION shall find measurement errors are within the

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 12) and TS 5.5.18, Online Monitoring Program.

CALIBRATION of the resistance temperature detectors (RTD) sensors is accomplished by an in-place cross calibration that compares the other sensing elements with the recently installed sensing element.

Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION of the Core Exit thermocouple sensors is accomplished by an in-place cross calibration that compares the other sensing elements with the recently installed sensing element.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. St. Lucie Unit No. 2 Engineering System for Regulatory Guide 1.97
2. Regulatory Guide 1.97, Rev. 3.
3. NUREG-0737, Supplement 1.
4. NRC Safety Evaluation Report (SER).

Insert:

5. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.10.2

CHANNEL CALIBRATION is a complete check of the instrument channel including the sensor. The Surveillance verifies that the channel responds to the measured parameter within the necessary range and accuracy. Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION of the resistance temperature detectors (RTD) sensors is accomplished by an inplace cross calibration that compares the other sensing elements with the recently installed sensing element.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

The SR is modified by a Note, which excludes neutron detectors from the CHANNEL CALIBRATION.

SR 3.3.10.3

SR 3.3.10.3 is the performance of a CHANNEL FUNCTIONAL TEST. 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

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 3) and TS 5.5.18, Online Monitoring Program.

SR 3.3.10.4

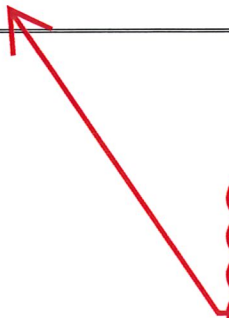
SR 3.3.10.4 verifies that each required Remote Shutdown System transfer switch and control circuit performs its intended function. This verification is performed from the hot shutdown panel and locally, as appropriate. Operation of the equipment from the hot shutdown panel is not necessary. The Surveillance can be satisfied by performance of a continuity check. This will ensure that if the control room becomes inaccessible, the plant can be placed and maintained in MODE 3 from the hot shutdown panel and the local control stations.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

REFERENCES

1. 10 CFR 50, Appendix A, GDC 19.
 2. NRC Safety Evaluation Report (SER).
-



Insert:

3. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.4.12.6

Performance of a CHANNEL CALIBRATION on each required PORV actuation channel is required to adjust the whole channel so that it responds and the valve opens within the required LTOP range and with accuracy to known input.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. 10 CFR 50, Appendix G.
2. Generic Letter 88-11.
3. WCAP-16817-NP, "St. Lucie Unit 2 RCS Pressure and Temperature Limits and Low Temperature Overpressure Protection Report for 55 Effective Full Power Years," Revision 2, October 2007.
4. 10 CFR 50.46.
5. 10 CFR 50, Appendix K.
6. Generic Letter 90-06.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 7) and TS 5.5.18, Online Monitoring Program.

Insert:

7. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.4.15.3 and SR 3.4.15.4

These SRs require the performance of a CHANNEL CALIBRATION for each of the RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. 10 CFR 50, Appendix A, Section IV, GDC 30.
 2. Regulatory Guide 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973.
 3. UFSAR, Section 5.2.5.
-

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 4) and TS 5.5.18, Online Monitoring Program.

Insert:

4. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

L-2025-170
Enclosure 1

ATTACHMENT 7
Turkey Point Technical Specifications Page Markups

(3 pages follow)

1.0 USE AND APPLICATION

1.1 Definitions

NOTE

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

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

INSERT:
(excluding transmitters in the
Online Monitoring Program)

5.5 Programs and Manuals

5.5.17 Risk Informed Completion Time Program

This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09-A, Revision 0, "Risk-Managed Technical Specifications (RMTS) Guidelines." The program shall include the following:

- a. The RICT may not exceed 30 days;
- b. A RICT may only be utilized in MODES 1 and 2;
- c. When a RICT is being used, any change to the plant configuration within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
 1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
 2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.
- e. Use of a RICT is not permitted for entry into a configuration which represents a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE.



INSERT:
New TS 5.5.18 here



5.5.18 Online Monitoring Program

This program provides controls to determine the need for calibration of pressure, level, and flow transmitters using condition monitoring based on drift analysis. It also provides a means for in-situ dynamic response assessment using the noise analysis technique to detect failure modes that are not detectable by drift monitoring.

The Online Monitoring Program must be implemented in accordance with AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters" (proprietary version). The program shall include the following elements:

- a. Implementation of online monitoring for transmitters that have been evaluated during the plant operating cycle in accordance with the NRC approved methodology.
 - 1) Analysis of online monitoring data to identify those transmitters that require a calibration check and those that do not require a calibration check.
 - 2) Performance of online monitoring using noise analysis to assess in-situ dynamic response of transmitters that can affect response time performance.
 - 3) Calibration checks of identified transmitters no later than during the next refueling outage.
 - 4) Documentation of the results of the online monitoring data analysis.
- b. Performance of a calibration check for any transmitter where the online monitoring was not implemented during the plant operating cycle no later than during the next refueling outage.
- c. Performance of calibration checks for transmitters at the specified backstop frequencies.
- d. The provisions of Surveillance Requirement 3.0.3 are applicable to the required calibration checks specified in items a.3, b, and c above.

L-2025-170
Enclosure 1

ATTACHMENT 8
Turkey Point Technical Specifications Bases Page Markups

(7 pages follow)

BASES

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 8) and TS 5.5.18, Online Monitoring Program.

SURVEILLANCE REQUIREMENTS (continued)

This test will verify the rate lag compensation for flow from the core to the RTDs.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.3.1.10 is modified by Notes as identified in Table 3.3.1-1. Note (b) requires evaluation of channel performance for the condition where the as-found setting for the channel setpoint is outside its as-found tolerance but conservative with respect to the Allowable Value. Evaluation of channel performance will verify that the channel will continue to behave in accordance with safety analysis assumptions and the channel performance assumptions in the setpoint methodology. The purpose of the assessment is to ensure confidence in the channel performance prior to returning the channel to service. For channels determined to be OPERABLE but degraded, and returning the channel to service the performance of these channels will be evaluated under the plant Corrective Action Program. Entry into the Corrective Action Program will ensure required review and documentation of the condition. Note (c) requires that the as-left setting for the channel be returned to within the calibration tolerance of the Trip Setpoint. Where a setpoint more conservative than the Trip Setpoint is used in the plant surveillance procedures (field setting), the calibration tolerances, as applicable, will be applied to the surveillance procedure setpoint. This will ensure that sufficient margin to the Safety Limit and/or Analytical Limit is maintained. If the as-left channel setting cannot be returned to a setting within the calibration tolerance of the Trip Setpoint, then the channel shall be declared inoperable.

The Note (c) also requires that the nominal Trip Setpoint and the methodology of Reference 7 for calculating the as-left and the as-found tolerances be specified in Reference 2.

SR 3.3.1.11

SR 3.3.1.11 is the performance of a COT of RTS interlocks. 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 COT 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.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

REFERENCES

1. Regulatory Guide 1.105, Revision 3, "Setpoints for Safety Related Instrumentation."
2. UFSAR, Chapter 7.
3. UFSAR, Chapter 14.
4. IEEE-279-1971.
5. 10 CFR 50.49.
6. WCAP-18888-P, "Westinghouse Setpoint Methodology for Protection Systems Turkey Point Units 3 and 4 24-Month Fuel Cycle," January 2024.
7. WCAP-17504-P-A, Revision 1, "Westinghouse Generic Setpoint Methodology," October 2016.

Insert:

8. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

The SR is modified by a Note that excludes verification of setpoints for relays. Relay setpoints require elaborate bench calibration and are verified during CHANNEL CALIBRATION.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.3.2.5

SR 3.3.2.5 is the performance of a TADOT. This test is a check of the Manual Actuation Functions and AFW pump start on trip of all MFW pumps. Each Manual Actuation Function is tested up to, and including, the master relay coils. 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 TADOT 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. In some instances, the test includes actuation of the end device (i.e., pump starts, valve cycles, etc.).

The Surveillance Frequency is controlled under the Surveillance

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 7) and TS 5.5.18, Online Monitoring Program.

SR 3.3.2.6

SR 3.3.2.6 is the performance of a CHANNEL CALIBRATION.

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

CHANNEL CALIBRATIONS must be performed consistent with the assumptions of the unit specific setpoint methodology. The difference between the current "as-found" values and the previous test "as-left" values must be consistent with the drift allowance used in the setpoint methodology.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

This SR is modified by a Note stating that this test should include verification that the time constants are adjusted to the prescribed values where applicable.

SR 3.3.2.6 is modified by Notes as identified in Table 3.3.2-1. Note (g) requires evaluation of channel performance for the condition where the as-found setting for the channel setpoint is outside its as-found tolerance but conservative with respect to the Allowable Value. Evaluation of channel performance will verify that the channel will continue to behave in accordance with safety analysis assumptions and the channel performance assumptions in the setpoint methodology. The purpose of the assessment is to ensure confidence in the channel performance prior to returning the channel to service. For channels determined to be OPERABLE but degraded, and returning the channel to service the performance of these channels will be evaluated under the plant Corrective Action Program. Entry into the Corrective Action Program will ensure required review and documentation of the condition. Note (c) requires that the as-left setting for the channel be returned to within the calibration tolerance of the Trip Setpoint. Where a setpoint more conservative than the Trip Setpoint is used in the plant surveillance procedures (field setting), the calibration tolerances, as applicable, will be applied to the surveillance procedure setpoint. This will ensure that sufficient margin to the Safety Limit and/or Analytical Limit is maintained. If the as-left channel setting cannot be returned to a setting within the calibration tolerance of the Trip Setpoint, then the channel shall be declared inoperable.

Note (h) also requires that the nominal Trip Setpoint and the methodology of Reference 14 for calculating the as-left and the as-found tolerances be in UFSAR Section 7.2.

REFERENCES

1. Regulatory Guide 1.105, "Setpoint for Safety Related Instrumentation," Revision 3.
2. UFSAR, Chapter 6.
3. UFSAR, Chapter 7.
4. UFSAR, Chapter 14.
5. IEEE-279-1971.
6. 10 CFR
7. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program. ←

- REFERENCES
1. NRC SER (McDonald to Woody) dated March 20, 1986, "Instrumentation To Follow The Course Of An Accident – Conformance To Regulatory Guide 1.97, Rev. 3."
 2. Regulatory Guide 1.97, Rev. 3, May 1983.
 3. NUREG-0737, Supplement 1, "TMI Action Items."
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Insert:

4. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 4) and TS 5.5.18, Online Monitoring Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

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. The COT will verify the setpoint is within the allowed maximum limits. PORV actuation could depressurize the RCS and is not required.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

Insert:

Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 6) and TS 5.5.18, Online Monitoring Program.

SR 3.4.12.5

Performance of a CHANNEL CALIBRATION on each required PORV actuation channel is required to adjust the whole channel so that it responds and the valve opens within the required range and accuracy to known input.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. 10 CFR 50, Appendix G.
2. NRC Letter, April 22, 1985, "Safety Evaluation by NRR Related to Amendment No. 112 to Facility Operating License No. DPR-31 and Amendment No. 106 to Facility Operating License No. DPR-41," D.G. MacDonald to J.W. Williams."
3. UFSAR, Chapter 14.
4. CN-CPS-09-79, "LTOPS Analysis for Turkey Point Units 3 and 4 Extended Power Uprate Program," dated September 21, 2009.
5. Generic Letter 90-06.

Insert:

6. AMS-TR-0720R2-A, "Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters."

BASES

SURVEILLANCE REQUIREMENTS (continued)

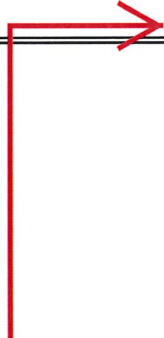
SR 3.4.15.3 and SR 3.4.15.4

These SRs require the performance of a CHANNEL CALIBRATION for each of the RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment.

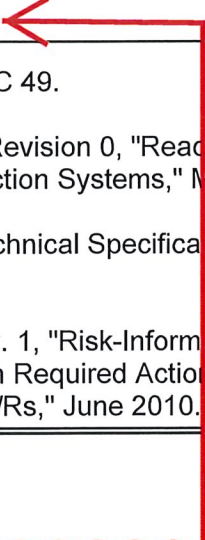
The Surveillance Frequency is controlled under the Surveillance Frequency Control Program. 

REFERENCES

1. 1967 AEC Proposed GDC 49.
 2. Regulatory Guide 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973.
 3. O-ADM-536, Rev. 39, Technical Specification Bases Control Program.
 4. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.
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Insert:
5. AMS-TR-0720R2-A,
"Online Monitoring
Technology to Extend
Calibration Intervals of
Nuclear Plant Pressure
Transmitters."



Insert:
Alternately, the Frequency for checking the calibration of pressure, level, and flow transmitters may be determined in accordance with the Online Monitoring Program implemented in accordance with AMS-TR-0720R2-A (Ref. 5) and TS 5.5.18, Online Monitoring Program.