UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 20, 2012

Mr. Preston Gillespie
Site Vice President
Oconee Nuclear Station
Duke Energy Carolinas, LLC
7800 Rochester Highway
Seneca, SC 29672

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3, ISSUANCE OF AMENDMENTS REGARDING REVISING THE FREQUENCY OF CERTAIN TECHNICAL SPECIFICATIONS SURVEILLANCE REQUIREMENTS FROM 18 MONTHS TO 24 MONTHS (TAC NOS. ME6727, ME6728, AND ME6729)

Dear Mr. Gillespie:

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 379, 381, and 380 to Renewed Facility Operating Licenses DPR-38, DPR-47, and DPR-55, for the Oconee Nuclear Station, Units 1, 2, and 3 (ONS 1/2/3), respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated May 6, 2010, as supplemented by letters dated February 11, 2011, April 28, 2011, July 19, 2011, and September 16, 2011.

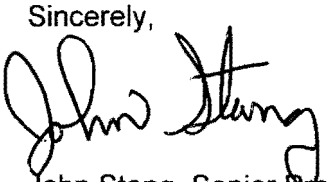
These amendments revise the TSs for ONS 1/2/3 to support operation with 24-month fuel cycles. Specifically, the change would revise the frequency of certain TS Surveillance Requirements (SRs) from "18 months" to "24 months," in accordance with the guidance of Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to accommodate a 24-Month Fuel Cycle."

Due to the concurrent implementation of the Amendment Nos. 372, 374, and 373 which were issued March 21, 2011, regarding adoption of Technical Specification Task Force (TSTF) – 425, Revision 3, "Relocate Surveillance Frequencies To Licensee Control - Risk-Informed Technical Specification Task Force (RITSTF) Initiative 5b," TSTF - 425 with amendment, the TS pages being issued with these amendments reflect the changes made by both amendments.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

If you have any questions, please call me at 301-415-1345.

Sincerely,



John Stang, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosures:
1. Amendment No. 379 to DPR-38
2. Amendment No. 381 to DPR-47
3. Amendment No. 380 to DPR-55
4. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 379
Renewed License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the Oconee Nuclear Station, Unit 1 (the facility), Renewed Facility Operating License No. DPR-38 filed by the Duke Energy Carolinas, LLC (the licensee), dated May 6, 2010, as supplemented by letters dated February 11, 2011, April 28, 2011, July 19, 2011, and September 16, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-38 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 379 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John P. Boska for

Nancy Salgado, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. DPR-38
and the Technical Specifications

Date of Issuance: April 20, 2012

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 381
Renewed License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the Oconee Nuclear Station, Unit 2 (the facility), Renewed Facility Operating License No. DPR-47 filed by the Duke Energy Carolinas, LLC (the licensee), dated May 6, 2010, as supplemented by letters dated February 11, 2011, April 28, 2011, July 19, 2011, and September 16, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-47 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 381 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John P. Boska for

Nancy Salgado, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. DPR-47
and the Technical Specifications

Date of Issuance: April 20, 2012

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 380
Renewed License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the Oconee Nuclear Station, Unit 3 (the facility), Renewed Facility Operating License No. DPR-55 filed by the Duke Energy Carolinas, LLC (the licensee), dated May 6, 2010, as supplemented by letters dated February 11, 2011, April 28, 2011, July 19, 2011, and September 16, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-55 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 380 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John P. Boska for

Nancy Salgado, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. DPR-55
and the Technical Specifications

Date of Issuance: April 20, 2012

ATTACHMENT TO LICENSE AMENDMENT NO. 379

RENEWED FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 381

RENEWED FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

TO LICENSE AMENDMENT NO. 380

RENEWED FACILITY OPERATING LICENSE NO. DPR-55

DOCKET NO. 50-287

Replace the following pages of the Licenses and the Appendix A Technical Specifications (TSs) with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Operating License

Remove Pages	Insert Pages
Licenses	Licenses
License No. DPR-38, page 3	License No. DPR-38, page 3
License No. DPR-47, page 3	License No. DPR-47, page 3
License No. DPR-55, page 3	License No. DPR-55, page 3
Technical Specifications	Technical Specifications
3.6.2-4	3.6.2-4
5.0.16	5.0.16
5.0.21	5.0.21

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 379 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1(d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

   (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.

   (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate. facilities for the generation and transmission of electricity which meets each of

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 381 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

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A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 380 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1(d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

   (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.1	----------NOTES---------- 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1. --- Perform required air lock leakage rate testing in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program
SR 3.6.2.2	Verify only one door in the air lock can be opened at a time.	In accordance with the Surveillance Frequency Control Program

5.5 Programs and Manuals (continued)

5.5.11 Secondary Water Chemistry

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation. The program shall include:

a. Identification of a sampling schedule for the critical variables and control points for these variables;

b. Identification of the procedures used to measure the values of the critical variables;

c. Identification of process sampling points;

d. Procedures for the recording and management of data;

e. Procedures defining corrective actions for all off control point chemistry conditions; and

f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

5.5.12 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2, except that the testing specified at a frequency of 18 months is required at a frequency of 24 months.

The VFTP is applicable to the Control Room Ventilation System (CRVS) Booster Fan Trains and the Spent Fuel Pool Ventilation System (SFPVS).

a. Demonstrate, for the CRVS Booster Fan Trains, that a DOP test of the HEPA filters shows ≥ 99.5% removal when tested in accordance with ANSI N510-1975 at the system design flow rate ± 10%.

b. Demonstrate, for the CRVS Booster Fan Trains, that a halogenated hydrocarbon test of the carbon adsorber shows ≥ 99% removal when tested in accordance with ANSI N510-1975 at the system design flow rate ± 10%.

5.5 Programs and Manuals (continued)

5.5.18 KHU Commercial Power Generation Testing Program (continued)

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the KHU Commercial Power Generation Testing Program surveillance frequencies.

5.5.19 Lee Combustion Turbine Testing Program

The Lee Combustion Turbine (LCT) Testing program shall include the following and shall be met when a LCT is used to comply with Required Actions of Specification 3.8.1, "AC Sources-Operating" or as a emergency power source as allowed by LCO 3.8.2, "AC Sources-Shutdown":

a. Verify an LCT can energize both standby buses using 100kV line electrically separated from system grid and offsite loads every 12 months.

b. Verify an LCT can supply equivalent of one Unit's Loss of Coolant Accident (LOCA) loads plus two Unit's Loss of Offsite Power (LOOP) loads when connected to system grid every 12 months.

c. Verify an LCT can provide equivalent of one Unit's LOCA loads within one hour through 100kV line electrically separated from system grid and offsite loads every 24 months.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Lee Combustion Turbine Testing Program surveillance frequencies.

5.5.20 Battery Discharge Testing Program

The Battery Discharge Testing Program shall include the following and shall be met for batteries used to comply with LCO 3.8.3, "DC Sources Operating."

a. Verify battery capacity is $\geq$ 80% of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test once every 60 months. This frequency shall be reduced to 12 months when battery shows degradation, or has reached 90% of the expected life with capacity < 100% of manufacturer's rating, and 24 months when battery has reached 90% of the expected life with capacity $\geq$ 100% of manufacturer's rating.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 379 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-38

AMENDMENT NO. 381 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-47

AND

AMENDMENT NO. 380 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-55

DUKE ENERGY CAROLINAS, LLC

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

DOCKET NOS. 50-269, 50-270, AND 50-287

1.0 INTRODUCTION

By application dated May 6, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML101330499), as supplemented by letters dated February 11, 2011 (ADAMS Accession No. ML110480489), April 28, 2011 (ADAMS Accession No. ML11124A126), July 19, 2011 (ADAMS Accession No. ML11203A018), and September 16, 2011 (ADAMS Accession No. ML11264A042), Duke Energy Carolinas, LLC (Duke, the licensee), requested changes to the Technical Specifications (TSs) for the Oconee Nuclear Station, Units 1, 2, and 3 (ONS 1/2/3). The supplements dated February 11, 2011, April 28, 2011, July 19, 2011, and September 16, 2011 provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on September 7, 2010 (75 FR 54394).

The amendment will revise the TSs for the ONS 1/2/3 to support operation for a 24-month fuel cycles. Specifically, the change would revise the frequency of certain TS Surveillance Requirements (SRs) from 18 months to 24 months, in accordance with the guidance of Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle" (ADAMS Accession No. ML031140501).

Due to the concurrent implementation by the licensee of the Amendment Nos. 372, 374, and 373, which were issued March 21, 2011 (ADAMS Accession No. ML110470660), regarding adoption of Technical Specification Task Force (TSTF) – 425, Revision 3, "Relocate Surveillance Frequencies To Licensee Control - Risk-Informed Technical Specification Task Force (RITSTF) Initiative 5b" with this amendment, the TS pages being issued with these amendments reflect the changes made by both amendments.

2.0 REGULATORY EVALUATION

Regulatory requirement 10 CFR 50.36, "Technical Specifications," states the content required in a licensee's TS. Specifically, 10 CFR 50.36(c)(3) requires that the TS include surveillance requirements 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 are met. GL 91-04 indicates that SRs with an 18-month frequency requirement that are not instrument calibration related should be evaluated for the effect on safety associated with an extension to a 24-month required interval. This evaluation by a licensee should:

- analyze the effect on plant safety from the change in surveillance intervals to accommodate a 24-month fuel cycle. This evaluation should support a conclusion that the effect on safety is small.

- confirm that historical maintenance and surveillance data do not invalidate this conclusion that the effect on safety is small.

- confirm that the performance of surveillance at the bounding surveillance interval limit would not invalidate any assumption in the plant licensing-basis.

For those surveillances where the evaluation accomplishes these goals, the licensees need not quantify the effect of the change in surveillance intervals on the availability of individual systems or components. No change in the existence, testability or availability of plant systems and components is being requested, only the extension in the frequency of tests or inspections.

GL 91-04 also stipulates that the licensee should evaluate the following for calibration-related frequency changes:

- Confirm that instrument drift as determined by as-found and as-left calibration data from surveillance and maintenance records has not, except on rare occasions, exceeded acceptable limits for a calibration interval.

- Confirm that the values of drift for each instrument type (make, model, and range) and application have been determined with a high probability and a high degree of confidence. Summarize the methodology and assumptions used to determine the rate of instrument drift with time-based upon historical plant calibration data.

- Confirm that the magnitude of instrument drift has been determined with a high probability and a high degree of confidence for a bounding calibration interval of 30 months for each instrument type (make, model number, and range) and application that performs a safety function. Provide a list of the channels by TS section that identifies these instrument applications.

- Confirm that a comparison of the projected instrument drift errors has been made with the values of drift used in the setpoint analysis. If this results in revised setpoints to accommodate larger drift errors, provide proposed TS changes to update trip setpoints. If the drift errors result in a revised safety analysis to support existing setpoints, summarize

the updated analysis conclusions to confirm that safety limits and safety analysis assumptions are not exceeded.

- Confirm that the projected instrument errors caused by drift are acceptable for the control of plant parameters to affect a safe shutdown with the associated instrumentation.

- Confirm that all conditions and assumptions of the setpoint and safety analyses have been checked and are appropriately reflected in the acceptance criteria of plant surveillance procedures for channel checks, channel functional tests, and channel calibrations.

- Provide a summary description of the program for monitoring and assessing the effects of increased calibration surveillance intervals on instrument drift and on safety.

The NRC staff also considered the following regulatory requirements, communications and guides in assessing the proposed TS changes:

- Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," establishes the fundamental regulatory requirements. Specifically, Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 provides criteria for the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety.

- General Design Criteria (GDC) 18 of Title 10 *Code of Federal Regulations* Part 50 (10 CFR 50), "Inspection and Testing of Electric Power Systems," requires that electric power systems that are important to safety must be designed to permit appropriate periodic inspection and testing." 10 CFR 50.36(c)(3), "Technical Specifications," include SRs, which 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 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," includes the requirements that preventive maintenance activities must not reduce the overall availability of the systems, structures and components.

- Regulatory Guide (RG) 1.105, "Setpoints for Safety-Related Instrumentation," Revision 3, issued December 1999 (ADAMS Accession No. ML993560062), describes a method that the NRC staff considers acceptable for complying with the agency's regulations for ensuring that setpoints for safety-related instrumentation are initially within and remain within the TS limits. RG 1.105 endorses Part I of Instrument Society of America (ISA) Standard 67.04-1994, "Setpoints for Nuclear Safety-Related Instrumentation," subject to NRC staff clarifications. The NRC staff used this guide to establish the adequacy of the licensee's setpoint calculation methodologies and the related plant surveillance procedures.

- In Regulatory Issue Summary (RIS) 2006-17, "NRC Staff Position on the Requirements of 10 CFR 50.36, 'Technical Positions,' Tegarding Limiting Safety System Settings during Periodic Testing and Calibration of Instrument Channels," dated August 24, 2006

(ADAMS Accession No. ML051810077), the NRC addresses requirements on limiting safety system settings that are assessed during the periodic testing and calibration of instrumentation. RIS 2006-17 discusses issues that could occur during the testing of limiting safety system settings and that, therefore, may have an adverse effect on equipment operability.

- Regulatory Guide 1.52, Revision 2, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Featured Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants" provides guidance on testing requirement for filtrations systems (ADAMS Accession No. 791710111).

Similar license amendments extending SRs to accommodate a 24-month fuel cycle have been approved by the NRC for Browns Ferry Nuclear Plant Units 1, 2, and 3, September 28, 2006 (ADAMS Accession No. ML062170002), Clinton Power Station Unit 1, October 21, 2005, (ADAMS Accession No. ML052940480), Monticello Nuclear Generating Plant, September 30, 2005 (ADAMS Accession No. ML052780367), and River Bend Station, August 31, 2010 (ADAMS Accession No. ML102350266).

3.0 TECHNICAL EVALUATION

Improved reactor fuels allow licensees to consider an increase in the duration of the fuel cycle for their facilities. The NRC staff has reviewed requests for individual plants to modify TS surveillance intervals to be compatible with a 24-month fuel cycle. The NRC staff issued GL 91-04 to provide generic guidance to licensees for preparing such license amendment requests.

For each of the proposed surveillance extensions, the licensee collected the most recent surveillance test results and associated maintenance records for at least five of the most recent cycles of operation before and including the refueling outage in spring 2008, which is equivalent to three 30-month surveillance periods. The licensee collected samples, where possible, for each proposed TS change to ensure a 95/95 confidence level. Drift calculations produced values with a 95 percent probability, with a 95 percent confidence. Where adequate data did not exist for a rigorous drift calculation, separate assessments were prepared to produce a high probability with a high degree of confidence. In addition to evaluating the historical drift data with 18-month calibrations, the licensee also evaluated the failure history of the related instrumentations.

3.1 Noncalibration-Related Changes

TS 3.3.6 Engineered Safeguards Protection System (ESPS) Manual Initiation:

SR 3.3.6.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.6.1 is to perform a channel function test for the ESPS manual initiation. This SR verified the manual initiation of the ESPS. The licensee observed no failures from the failure history analysis of the above instrumentation.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing-basis would be invalidated.

The NRC staff finds extending the SR frequency 3.3.6.1 to once per 24 months is acceptable. The NRC staff's finding is based on, 1) consistency with the guidance provided in GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.3.7 Engineered Safeguards Protection System (ESPS) Automatic Actuation Output Logic Channels:

SR 3.3.7.2 Perform automatic actuation output logic CHANNEL FUNCTIONAL TEST.

By letter dated January 28, 2010 (ADAMS Accession No. ML100220016) the NRC issued Amendment numbers 366, 367, and 368, for ONS 1/2/3. The amendments approved upgrading the existing analog reactor protective system (RSP)/ESPS with a new digital upgrade to the RPS/ESPS. In the application and supplements, the licensee justified surveillance intervals for this instrumentation of 24 months for a maximum interval of 30 months. The NRC staff reviewed the licensee's justification, and found that it was in accordance with GL 91-04. Therefore, the NRC approved a surveillance interval for SR 3.3.7.2 of 24 months for the new digital RPS/ESPS upgrade instrumentation.

The digital upgrade has only been completed on Oconee Unit 1. The digital upgrade for Unit 3 is scheduled for the spring of 2012 and Unit 2 for the fall of 2013. The licensee has committed to keeping the existing TSs SRs for the units which have not completed the upgrade.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, and no assumptions in the plant licensing-basis would be invalidated.

The NRC staff finds extending SR 3.3.7.2 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) NRC staff's previous review and approval, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.12 Automatic Feedwater Isolation System (AFIS) Manual Initiation:

SR 3.3.12.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.12.1 is to perform the channel functional test for the manual initiation of AFIS. This SR verifies the manual initiation of the AFIS. The licensee observed no failures from the failure history analysis of the above instrumentation.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing-basis would be invalidated.

The NRC staff finds extending SR 3.3.12.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of the proposed change.

TS 3.3.13 Automatic Feedwater Isolation System (AFIS) Digital Channels:

SR 3.3.13.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.13.1 requires a channel functional test be performed for the AFIS. This SR verifies the AFIS digital channels are functioning properly. The licensee observed no failures from the failure history analysis of the above instrumentation.

The NRC staff has reviewed the licensee's proposed request and found extending SR 3.3.13.1 is in accordance with guidance of GL 91-04. The surveillance history has not identified failures. The impacts on plant-safety for the SR extension, if any, are small. Therefore, NRC staff finds extending the SR requirement from 18 months to 24 months is acceptable.

TS 3.3.14 Emergency Feedwater (EFW) Pump Initiation Circuitry:

SR 3.3.14.3 Perform CHANNEL FUNCTIONAL TEST for each automatic initiation circuit.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.14.3 requires a channel functional test be performed for the EFW pump initiation circuitry.

The licensee's failure history review of SR 3.3.14.3 indicated only one failure during surveillance testing when a Cutler Hammer time delay relay was out of tolerance and would not calibrate. The relay was replaced and no additional failure have been observed demonstrating the reliability of the system.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing-basis would be invalidated.

The NRC staff finds that extending SR 3.3.14.3 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3)

that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.17 Emergency Power Switching Logic (EPSL) Automatic Transfer Function:

SR 3.3.17.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The SR 3.3.17.1 to perform the channel functional test verifies the transfer functions.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing-basis would be invalidated.

The NRC staff finds that extending SR 3.3.17.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.18 Emergency Power Switching Logic (EPSL) Voltage Sensing Circuits:

SR 3.3.18.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.18.1 requires a channel functional test be performed to verify the EPSL voltage sensing circuits will perform their intended function. The licensee's review of the surveillance history did not identify any failing of the TS function that would have been detected by the periodic performance of this SR.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing-basis would be invalidated.

The NRC staff finds that extending SR 3.3.18.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.19 Emergency Power Switching Logic (EPSL) 230 kV Switchyard Degraded Grid Voltage Protection (DGVP)

SR 3.3.19.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR ensures that a given channel of the EPSL 230 kV DGVP is functional.

The licensee's review of the applicable surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the plant licensing-basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SR 3.3.19.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.20 Emergency Power Switching Logic (EPSL) CT-5 Degraded Grid Voltage Protection (DGVP)

SR 3.3.20.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR ensures that a given channel of the EPSL CT-5 DGVP is functional.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SR 3.3.20.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.21 Emergency Power Switching Logic (EPSL) Emergency Start Function:

SR 3.3.21.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The SR 3.3.21.1 to perform the channel functional test verifies the transfer functions.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SR 3.3.21.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.23 Main Feeder Bus Monitor Panel (MFBMP):

SR 3.3.23.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR ensures the MFBMP is functional.

The licensee stated that a review of the applicable surveillance history of SR 3.3.23.1 demonstrated only one failure that would have been detected solely by the periodic performance of the above SR. On October 27, 2002, an investigation during the performance of a calibration test procedure determined that an auxiliary contact did not close. The investigation performed by the licensee identified an improper alignment of the auxiliary switch. Adjustments of this alignment by the licensee on the auxiliary switch fixed the problem. The licensee stated that the identified failure is unique because it did not occur on a repetitive basis, and is not associated with a time-based failure mechanism. Based on the information provided by the licensee, the NRC staff finds the failure is unique.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SR 3.3.23.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.28 Low Pressure Service Water (LPSW) Standby Pump Auto-Start Circuitry:

SR 3.3.28.1 Perform CHANNEL FUNCTIONAL TEST.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR insures the LPSW standby pump auto-start activity will function.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR 3.3.28.1 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.4.1 RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits

SR 3.4.1.4 Verify by measurement RCS total flow rate is within limit specified in the COLR [core operating limits report]

The surveillance test interval of this SR is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. Measurement of reactor coolant system (RCS) total flow rate by performance of a calorimetric heat balance once after a refueling outage allows the installed RCS flow instrumentation to be calibrated and verifies that the actual RCS flow is greater than or equal to the minimum required RCS flow rate specified in the core operating limits report (COLR).

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SR 3.4.1.4 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.4.9 Pressurizer

SR 3.4.9.2 Verify capacity of required pressurizer heaters and associated power supplies are > [greater than] 400 kW.

The surveillance test interval of this SR is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The SR verifies the power supplies are capable of producing the minimum power and the associated pressurizer heaters are at their design rating.

The licensee's review of the applicable ONS surveillance history demonstrated that all surveillance tests were acceptable with one exception.

The licensee found one failure of the TS required equipment that would have been detected solely by the periodic performance of the above SR. An examination of the failure mechanism by the licensee revealed that moisture was suspected in the cables. After cleaning the internal bus and outside of the breaker case, readings were still not satisfactory. The top two breakers were replaced. Corrective actions associated with the failure included design changes and part and

component replacement. No similar failures were identified. The licensee determined that these concerns were not attributable to the fuel cycle length. Thus, the impact on system availability is minimal from the proposed change to a 24-month testing frequency. The identified failure is unique, and does not occur on a repetitive basis and is not associated with a time-based failure mechanism.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, the corrective action for failure was acceptable, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SR 3.4.9.2 frequency to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.4.14 Reactor Coolant System (RCS) Pressure Isolation Valve (PIV) Leakage

SR 3.4.14.1 Verify leakage from each required RCS PIV is equivalent to less than (<) 0.5 gallons per minute (gpm) per nominal inch of valve size up to a maximum of 5 gpm at an RCS pressure > 2150 pounds per square inch absolute (psia) and < 2190 psia.

The surveillance test interval of this SR is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. Performance of leakage testing on each required RCS PIV or isolation valve is required to verify that leakage is below the specified limit and to identify each leaking valve.

The licensee stated that a review of the surveillance test history determined there were no previous failures of the TS functions that would have been detected by the periodic performance of this SR. The licensee concluded that the impact on system availability is minimal for the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR 3.4.14.1 frequency to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.5.2 High Pressure Injection (HPI)

SR 3.5.2.4 Verify each HPI automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.

SR 3.5.2.5 Verify each HPI pump starts automatically on an actual or simulated actuation signal.

SR 3.5.2.6 Verify, by visual inspection, each HPI train reactor building sump suction inlet is not restricted by debris and suction inlet strainers show no evidence of structural distress or abnormal corrosion.

SR 3.5.2.7 Cycle each HPI discharge crossover valve and LPI [low pressure injection]-HPI flow path discharge valve.

The surveillance test interval of these SRs is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.5.2.4 and SR 3.5.2.5 demonstrate that each automatic HPI valve actuates to the required position and that each HPI pump starts on an actual or simulated Engineered Safeguards Protective System (ESPS) signal. Periodic inspections of the reactor building sump suction inlet required by SR 3.5.2.6 ensure that it is unrestricted and stays in proper operating condition. Periodic stroke testing of the HPI discharge crossover and LPI-HPI flow path discharge valves required by SR 3.5.2.7 ensure that the valves can be manually cycled from the control room.

The licensee stated that for SR 3.5.2.4 and SR 3.5.2.5, the actuation logic is tested as part of the ESPS testing, and equipment performance is monitored as part of the Inservice Testing (IST) Program. The licensee's review of the applicable ONS surveillance history demonstrated that there were no failures of the TS functions that would have been detected solely by the periodic performance of these SRs. As such, the impact on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, equipment performance is monitored as part of the IST Program, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR frequencies for SRs 3.5.2.4, 3.5.2.5, 3.5.2.6, and 3.5.2.7 to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.5.3 Low Pressure Injection (LPI)

SR 3.5.3.4 Verify each LPI automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.

SR 3.5.3.5 Verify each LPI pump starts automatically on an actual or simulated actuation signal.

SR 3.5.3.6 Verify, by visual inspection, each LPI train reactor building sump suction inlet is not restricted by debris and suction inlet strainers show no evidence of structural distress or abnormal corrosion.

The surveillance test interval of these SRs is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SRs 3.5.3.4 and SR 3.5.3.5 demonstrate that each automatic LPI valve actuates to the required position and that each LPI pump starts on an actual or simulated ESPS signal. Periodic inspections of the reactor building sump suction inlet required by SR 3.5.3.6 ensure that it is unrestricted and stays in proper operating condition.

The licensee stated that for SR 3.5.3.4 and SR 3.5.3.5, the actuation logic is tested as part of the ESPS testing, and equipment performance is monitored as part of the IST Program. The licensee's review of the applicable ONS surveillance history demonstrated that there were no failures of the TS functions that would have been detected solely by the periodic performance of the these SRs. Therefore, the impact on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, equipment performance is monitored as part of the IST Program, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending the SR frequencies for SRs 3.5.3.4, 3.5.3.5, and 3.5.3.6 to once per 24 months is acceptable. The NRC staff's is based on, 1) consistency with the guidance provided in GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.6.2 Containment Air Locks

SR 3.6.2.2 Verify only one door in the air lock can be opened at a time

The surveillance test intervals of these SRs are to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.6.2.2 verifies the interlock mechanism associated with the containment air lock doors is functioning properly.

The licensee conducted a review of the applicable ONS surveillance history for at least the last five cycles beginning with Unit 1 spring 2002 outage, Unit 2 spring 2001 outage, and Unit 3 fall 2001 outage, which determined that there were no previous failures of the TS function that would have been detected solely by the periodic performance of the SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The licensee noted that periodic testing of this interlock demonstrates that the interlock will function as designed and that simultaneous opening of the inner and outer doors will not inadvertently occur. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension.

The NRC staff finds that extending SR 3.6.2.2 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.6.3 Containment Isolation Valves

SR 3.6.3.5 Verify each automatic containment isolation valve that is not locked, sealed, or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR verifies that each automatic containment isolation valve closes on a containment isolation signal to prevent leakage of radioactive material from containment following an accident.

The licensee conducted a review of the applicable ONS surveillance history for the last five cycles (beginning with Unit 1 spring 2002 outage, Unit 2 spring 2001 outage, and Unit 3 fall 2001 outage), which demonstrated that there were no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR 3.6.3.5 frequency to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.6.5 Reactor Building (RB) Spray and Cooling Systems

SR 3.6.5.4 Verify that the containment heat removal capability is sufficient to maintain post accident conditions within design limits.

SR 3.6.5.5 Verify each automatic reactor building spray and cooling valve in each required flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.

SR 3.6.5.6 Verify each required building spray pump starts automatically on an actual or simulated actuation signal.

SR 3.6.5.7 Verify each required reactor building cooling train starts automatically on actual or simulated or simulated actuation signal.

The surveillance test intervals of these SRs are to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.6.5.4 verifies that the heat removal capability of the LPI Coolers and Reactor Building Cooling Units, SR 3.6.5.5, SR 3.6.5.6 and SR 3.6.5.7 demonstrate that automatic reactor building spray and cooling valve in each required flow path actuates to the required position and that each reactor building spray pump and reactor building cooling train starts on an actual or simulated actuation signal.

The licensee conducted a review of the applicable ONS surveillance history for at least the last five cycles (beginning with Unit 1 spring 2002 outage, Unit 2 spring 2001 outage, and Unit 3 fall 2001 outage), which determined that there were no previous failures of the TS functions that would have been detected solely by the periodic performance of these SRs.

The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SRs 3.6.5.4, 3.6.5.5, 3.6.5.6, and 3.6.5.7 frequencies to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.7.2 Turbine Stop Valves (TSV)

SR 3.7.2.1 Verify closure time of each TSV is < [less then] 1.0 second on an actual or simulated actuation signal from Channel A.

SR 3.7.2.2 Verify closure time of each TSV is < 1.0 second on an actual or simulated actuation signal from Channel B.

The surveillance test interval of these SRs is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The SRs verify that TSV closure time of each TSV is < 1.0 second on an actual or simulated actuation signal from Channel A or B.

The licensee's review of the applicable ONS surveillance history demonstrated that all surveillance tests were acceptable with two exceptions, as described below.

There were two failures (one on each channel) of TS required equipment for this function that would have been detected solely by the periodic performance of the above SRs. Troubleshooting for one of the failures found a wire disconnected at a terminal of one of the channels. A fast acting solenoid valve was also replaced. The identified failure was unique, and has not occurred on a repetitive basis, and was not associated with a time-based failure mechanism. Troubleshooting for the other failure found a conductor had broken loose from the solder pin of the electrical connector of a fast acting solenoid valve. The conductor was re-soldered with no other problems encountered. No similar failures were identified. Corrective actions associated with failures included design changes and part and component replacement. The licensees determined that these failures were not attributable to the fuel cycle length. Thus, the impact on system availability is minimal from the proposed change to a 24-month testing frequency. The identified failure was unique and does not occur on a repetitive basis and was not associated with a time-based failure mechanism.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, the corrective actions for failures were acceptable, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SRs frequencies 3.7.2.1 and 3.7.2.2 to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.7.4 Atmospheric Dump Valve (ADV) Flow Paths

SR 3.7.4.1 Cycle the valves that comprise the ADV flow paths.

The surveillance test interval of this SR is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR ensures that the valves that comprise the ADV flow path for each steam generator are cycled through the full control range. Performance of IST or use of an ADV flow path during a unit cool down satisfies this requirement.

The licensee's review of the applicable ONS surveillance history demonstrated that all surveillance tests were acceptable with one exception, as described below.

The instrumentation for these functions had one failure of the TS functions that would have been detected solely by the periodic performance of this SR. During the performance of a test procedure, a valve was found closed. The valve opened and operated properly but would not close. Troubleshooting determined the auxiliary contacts required cleaning. The auxiliary contacts were cleaned to resolve the problem. The identified failure was unique and does not occur on a repetitive basis and was not associated with a time-based failure mechanism. Corrective actions included part and component maintenance. The licensee determined that the failures were not attributable to the fuel cycle length. Thus, the impact on system availability is minimal from the proposed change to a 24-month testing frequency. No similar failures were identified

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, the corrective action for the failure was acceptable, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR frequency 3.7.4.1 to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.7.5 Emergency Feedwater (EFW) System

SR 3.7.5.3 Verify each EFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.

SR 3.7.5.4 Verify each EFW pump starts automatically on an actual or simulated actuation signal.

The surveillance test interval of these SRs is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. These SRs verify that EFW can be delivered to the appropriate steam generator by demonstrating each automatic valve actuates to its correct position and each EFW pump starts automatically on an actual or simulated actuation signal.

The licensee's review of the applicable ONS surveillance history demonstrated that all surveillance tests were acceptable with one exception, as described below.

There was one failure of the TS functions that would have been detected solely by the periodic performance of the above SR. During the performance of an instrument procedure, a time delay relay setpoint was found out of tolerance low. The timer would not calibrate and was replaced with a new timer and was calibrated satisfactorily. Each of the concerns was evaluated. Corrective actions included design changes and part and component replacement. The licensee determined that these concerns were not attributable to the fuel cycle length. Thus, the impact on system availability is minimal from the proposed change to a 24-month testing frequency. The identified failure was unique and does not occur on a repetitive basis and was not associated with a time-based failure mechanism. No similar failures were identified.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, the corrective action for the failure was acceptable, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR frequencies for SR 3.7.5.3 and SR 3.7.5.4 to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.7.7 Low Pressure Service Water (LPSW) System

SR 3.7.7.3 Verify each LPSW automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.

SR 3.7.7.4 Verify each LPSW pump starts automatically on an actual or simulated actuation signal.

The surveillance test interval of these SRs is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. These SRs verify that the LPSW automatic valves actuate and pumps start automatically on an actuation signal.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SRs. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR frequencies for SRs 3.7.7.3 and 3.7.7.4 to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.7.7 Low Pressure Service Water (LPSW) System

SR 3.7.7.5 Verify LPSW leakage accumulator is able to provide makeup flow lost due to boundary valve leakage on Units with LPSW RB Waterhammer modification installed.

SR 3.7.7.6 Verify LPSW WPS boundary valve leakage is < 20 gpm for Units with LPSW RB Waterhammer modification installed.

The surveillance test interval of these SRs is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. These SRs verify that the LPSW automatic valves actuate and pumps start automatically on an actuation signal. These SRs were added as part of the station modification made to address GL 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions" (ADAMS Accession No. ML031110021), concerns associated with waterhammer inside containment during a loss-of-coolant accident (LOCA) or main steamline break (MSLB) combined with a LOOP event. The licensee installed a WPS in all Oconee units starting with Unit 2 in fall of 2008 and Units 3 and 1 in the spring and fall of 2009 respectively. Each unit has seen a full operating cycle with the WPS equipment. SRs 3.7.7.5 and 3.7.7.6 were performed and no failures were observed.

SR 3.7.7.5 verifies proper operation of the LPSW Reactor Building (RB) Waterhammer Prevention System (WPS) leakage accumulator. Verifying adequate flow from the accumulator provides assurance that in the event of boundary valve leakage during a loss of offsite power (LOOP) event, there is sufficient water to keep LPSW piping filled. The components required to satisfy SR 3.7.7.5 are the leakage accumulator tank, air tank, level instrument, and discharge piping including an orifice. The level instrumentation consists of a Rosemount 3051 transmitter that provides a digital output signal of accumulator tank level to the plant control system which in turns provides a digital signal to the operator aid computer (OAC). The Rosemount 3051 series transmitters have been used in multiple plant applications by the licensee some of which have current calibration frequencies equal to or greater than 24 months. Since the signal transmission for the accumulator tank level is digital, drift over time will be minimized. In addition, a local sight glass is also provided as an independent means to verify tank level.

The leakage accumulator components are passive devices and not subject to short-term degradation mechanisms. The main function verified under SR 3.7.7.5 is to ensure that the leakage accumulator can provide water at a rate greater than the allowed rate of boundary valve leakage, adjusted for the expected range of operating conditions. Orifice fouling is the most likely reason that the flow rate would be reduced from one outage to the next but fouling is expected to be a slow mechanism.

Although the licensee has performed only one surveillance on the newly installed equipment, the passive nature of the design leakage accumulator and operating experience with similar components used in the plant justifies the NRC staff's finding that 24 month frequency will have minimal impact on plant safety.

LPSW WPS boundary valves consist of a check valve and quick acting pneumatic valve. SR 3.7.7.6 insures that the boundary valve leakage is < 20 gpm.

Historical surveillance testing that has been performed by the licensee on similar pneumatic valves such as the boundary valves for the reactor building auxiliary cooling system, have shown no failures. These butterfly valves are designed for isolation on/off service as well as low flow control. The licensee's operating experience data base does not indicate any failures of these types of valves.

The design function of the installed check valves in this application is to close. The valves are installed in the vertical orientation which is expected to aid in the closing function. The check valves are angle split body tilting disc check valves. These valves have been installed and leak checked to verify that they are meeting the leakage requirements. These valves are in the IST condition monitoring (CM) program.

Based on the above evaluation, the NRC staff finds extending SR frequencies for SRs 3.7.7.5 and 3.7.7.6 is acceptable.

The NRC staff's conclusion is based on, 1) the passive nature of the design leakage accumulator and operating experience with similar components, 2) successful testing of similar plant components, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.7.8 Emergency Condenser Circulating Water (ECCW) System

SR 3.7.8.9 Verify upon an actual or simulated trip of the condenser circulating water (CCW) pumps and essential siphon vacuum (ESV) pumps that the rate of water level drop in the ECCW siphon header is within limits.

The surveillance test interval of this SR is being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The SR verifies that given a trip of CCW pumps and ESV pumps that the rate of water level drop in the ECCW siphon header is within limits.

The licensee's review of the applicable ONS surveillance history demonstrated that all surveillance tests were acceptable with two exceptions where failures of the TS functions that would have been detected solely by the periodic performance of the above SR.

a. On May 2, 2007, during the performance of a test procedure, level indications on 2c and 2d were identified as out of tolerance low. Troubleshooting by the licensee determined that the set screws on the spline collar of Valve 2CCW-463 had loosened, allowing the collar to slide down on the valve and out of the actuator. This meant that the valve disk was not moving therefore the valve was inoperable.

b. On May 20, 2003, during the performance of a test procedure, when the last CCW pump stopped, condenser outlet valves did not close as expected. Troubleshooting determined the switch was disconnected from the operating arm in breaker 3TC-5. The arm was reconnected and voltage was verified across contacts.

No similar failures were identified; therefore, the failures were not repetitive in nature. No time based degradation mechanisms are apparent. Therefore, these failures are unique and any subsequent failures would not result in a significant impact on system/component availability. As such, the impact, on system availability is minimal from the proposed change to a 24-month testing frequency. Considering the low failure rate, the NRC staff finds that impacts on plant safety are small.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, the corrective action for the failures was acceptable, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR frequency for SR 3.7.8.9 to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.7.9 Control Room Ventilation System (CRVS) Booster Fans

SR 3.7.9.3 Verify two CRVS Booster Fan trains can maintain the Control Room at a positive pressure.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR verifies the integrity of the control room enclosure by verifying that two CRVS Booster Fan trains can maintain the control room at a positive pressure.

The licensee conducted a review of the applicable Oconee surveillance history for at least the last five cycles (beginning with Unit 1 spring 2002 outage, Unit 2 spring 2001 outage, and Unit 3 fall 2001 outage), which demonstrated that there were no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. Considering that no failures were identified, the NRC staff finds that impacts on plant safety are small.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in the GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR 3.7.9.3 frequency to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.8.1 Alternating Current (AC) Sources – Operating

SR 3.8.1.14 Verify each closed SL and closed N breaker opens on an actuation of each redundant trip coil.

SR 3.8.1.15 Verify each 230 kilo Volt (kV) switchyard circuit breaker actuates to the correct position on a switchyard isolation actuation signal.

SR 3.8.1.17 Verify each KHU's (Keowee Hydro Unit) Voltage and Frequency out of tolerance logic trips and blocks closure of the appropriate overhead or underground power path breakers.

SR 3.8.1.14 verifies that each closed SL and N breakers will open. SR 3.8.1.15 verifies each 230kV switchyard circuit breaker will actuate to the correct position. SR 3.8.1.17 verifies each KHUs voltage and frequency out of tolerance logic trips and blocks are operable.

The surveillance test interval of TS SRs 3.8.1.14, 3.8.1.15 and 3.8.1.17 are being increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension in accordance with GL 91-04.

The licensee evaluated the surveillance test history for the affected surveillances and found the applicable ONS surveillance history demonstrated that there were no failures of the TS functions that would have been detected solely by the periodic performance of the above SRs. As such, the impact, if any, on system availability is minimal for the proposed change to a 24-month testing frequency. Considering that no failures were identified, the NRC staff finds that impacts on plant safety are small.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SRs 3.8.1.14, 3.8.1.15, and 3.8.1.17 frequencies to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS Section 5.5.12 Ventilation Filter Testing Program (VFTP)

Current TS Section 5.5.12: requires a testing frequency of 18 months in accordance with RG 1.52 Revision 2. The licensee proposes to change the TS performance testing requirement to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension.

TS Section 5.5.12 establishes a program to implement the required testing of filter ventilation systems at the frequencies specified in Regulatory Guide (RG) 1.52, Revision 2 "Design, Testing and Maintenance Criteria for Post Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants."

The licensee conducted a review of the applicable ONS surveillance history for at least the last five cycles (beginning with Unit 1 spring 2002 outage, Unit 2 spring 2001 outage, and Unit 3 fall 2001 outage), which demonstrated that there were no previous failures of ESF ventilation systems that would have been detected solely by the periodic performance of SRs that reference performance of the VFTP of TS 5.5.12. In addition, the NRC staff notes that RG 1.52, Revision 3,

changed the 18 month surveillance test intervals to 24 months. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending this SR frequency to once per 24 months is acceptable. The NRC staff's conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 5.5.19 Lee Combustion Turbine Testing Program

Surveillance 5.5.19 c Verify an LCT can provide equivalent of one Unit's Loss of Coolant Accident (LOCA) loads within one hour through 100KV line electrically separated from system grid and offsite loads every 18 months.

The licensee proposes to increase the test interval of this SR from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This test procedure consists of energizing the Unit 3 4160 Volt Main Feeder Buses from transformer CT-5 from an isolated Lee Steam Station Combustion Turbine and loading to greater than or equal to 6 MegaWatts electric (MWe) within one hour. Because of the test configuration, this testing alignment is required to be performed during Unit 3 outage, but is applicable to all three units.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending this SR 5.5.19 c frequency to once per 24 months is acceptable. The NRC staff conclusion is based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

3.2 Calibration-Related Changes

TS 3.3.1 Reactor Protective System (RPS) Instrumentation:

SR 3.3.1.7 Perform CHANNEL CALIBRATION.

Function 1 Nuclear Overpower
Function 2 RCS High Outlet Temperature
Function 3 RCS High Pressure
Function 4 RCS Low Pressure
Function 5 RCS Variable Low Pressure
Function 6 Reactor Building High Pressure
Function 7 Reactor Coolant Pump to Power
Function 8 Nuclear Overpower Flux/Flow Imbalance
Function 9 Main Turbine Trip (Hydraulic Fluid Pressure)
Function 10 Loss of Main Feedwater Pumps (Hydraulic Oil Pressure)
Function 11 Shutdown Bypass RCS High Pressure

Function 1 Nuclear Overpower

The calibration interval of Function 1 of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension.

The licensee stated that all of the calibrated components in the RPS Nuclear Overpower High Setpoint Trip string are being replaced as part of the digital RPS/ESPS upgrade instruments. The digital upgrade has only been completed on Unit 1. The digital upgrade for Unit 3 is scheduled for the spring of 2012 and Unit 2 for the fall of 2013. As indicated in Section 1 of the SE, the NRC staff has reviewed and finds the digital RPS/ESPS upgraded instrumentation SR frequency for channel calibration of 24-months is acceptable, and is bounded for up to a 30 month calibration interval.

In order to support this change, the licensee recalculated the drift for the existing analog RPS Nuclear Overpower High Setpoint Trip string using Square Root Sum of the Squares (SRSS) extrapolated for a maximum 30 month calibration interval until the completion of the RPS/ESPS digital upgrade. The licensee is taking credit for the channel functional test for verifying proper operation of the loop every 92 days.

Based on the above discussion, the analog and digital RPS Nuclear Overpower High Setpoint Trip strings do not require an as found as left (AFAL) drift analysis to support a 24-month fuel cycle. A separate performance history review performed by the licensee for this function to support an extension to 24-month cycles demonstrated that there were no previous failures of the TS required channel calibration that would have been detected solely by the periodic performance of this SR.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds that extending SR calibration 3.3.1.7 Function 1 Nuclear Overpower to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the

guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, 3) NRC prior approval for Unit 1 digital upgrade, and 4) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.1 Reactor Protective System (RPS) Instrumentation

SR 3.3.1.7 Perform CHANNEL CALIBRATION.

Function 2 RCS High Outlet Temperature

The calibration interval of Function 2 of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The licensee stated that this function is currently calibrated yearly, with the units online.

All the calibrated components in the RPS High Outlet Temperature string are being replaced with new components during the Digital RPS/ESPS Upgrade. The digital upgrade has only been completed on Unit 1. The digital upgrade for Unit 3 is scheduled for the spring of 2012 and Unit 2 for the fall of 2013. As stated above the NRC staff has reviewed and finds the digital RPS/ESPS upgraded instrumentation SR frequency for channel calibration of 24-months is acceptable, and is bounded for up to a 30 month calibration interval.

The analog Reactor Coolant Temperature Channel is monitored by a resistance temperature detector (RTD), a linear bridge module, an 880 signal converter module and two bistable trip modules. The licensee performed an SRSS extrapolation on the current RTD and linear bridge for a maximum 30 month calibration interval. Until completion of the RPS/ESPS upgrade, the RPS Nuclear Overpower High Setpoint Trip instrument loops take credit for the channel functional test for verifying proper operation of the loop every 92 days.

Based on the above discussion, the analog and digital RPS Nuclear Overpower High Setpoint Trip strings do not require an AFAL drift analysis to support a 24-month fuel cycle. A review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of the TS required channel calibration that would have been detected solely by the periodic performance of this SR.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.1.7 Function 2 RCS High Outlet Temperature to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, 3) NRC prior approval of the digital upgrade for Unit 1, and 4) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.1 Reactor Protective System (RPS) Instrumentation

SR 3.3.1.7 Perform CHANNEL CALIBRATION.

Function 7 Reactor Coolant Pump to Power

The calibration interval of Function 7 of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The electronics for this function are currently calibrated yearly, online while the watt transducers for this function are currently calibrated on an 18-month calibration interval during outage.

All calibrated Reactor Coolant Pump Monitor components in the RPS Reactor Coolant Pump to Power Trip string are being replaced with the Digital RPS/ESPS Upgrade. The digital upgrade has only been completed on Unit 1. The digital upgrade for Unit 3 is scheduled for the spring of 2012 and Unit 2 for the fall of 2013. As stated above, the NRC staff has reviewed and finds the digital RPS/ESPS upgraded instrumentation SR frequency for channel calibration of 24-months is acceptable, and is bounded for up to a 30 month calibration interval.

Until completion of the RPS/ESPS upgrade, the RPS Reactor Coolant Pump Monitor instrument loops (electronic portion) take credit for the channel functional test for verifying proper operation every 92 days.

The licensee stated that as indicated in the accident analysis the RCP monitor trip function acts in a near digital manner, tripping on a change in the pump status. The pump status can only be in one of two states, running or not running. This trip is used in accident analysis in the same manner. From Table 15-35 of Chapter 15 of the updated final safety report (UFSAR), for the pump monitor trip function, there is no nominal setpoint listed, and the limiting trip setpoint assumed in the analysis is not applicable. The trip condition for the events analyzed is based on the loss of two or more pumps. The licensee stated that since an analytical limit setpoint is not credited in the safety analysis, a comparison of the safety analysis setpoint to the TS setpoint, by accounting for uncertainties, including drift, is not necessary.

Based on the above discussion, the NRC staff finds, the analog and digital RPS Reactor Coolant Pump to Power Trip strings does not require an AFAL Drift Analysis to support an extension to a 24-month fuel cycle. A review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of the TS required channel calibration that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency is acceptable.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.1.7 Function 7 Reactor Coolant Pump to Power to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency

with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, 3) NRC prior approval for Unit 1, and 4) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.1 Reactor Protective System (RPS) Instrumentation

SR 3.3.1.7 Perform CHANNEL CALIBRATION.

Function 3 RCS High Pressure
Function 4 RCS Low Pressure
Function 5 RCS Variable Low Pressure
Function 6 Reactor Building High Pressure
Function 8 Nuclear Overpower Flux/Flow Imbalance
Function 9 Main Turbine Trip (Hydraulic Fluid Pressure)
Function 10 Loss of Main Feedwater Pumps (Hydraulic Oil Pressure)
Function 11 Shutdown Bypass RCS High Pressure

The calibration interval of these functions of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension.

A licensee review of the applicable ONS surveillance history demonstrated that the instrumentation for the above functions had six failures of the TS functions that would have been detected solely by the periodic performance of the above SR. According to the licensee, all six of the identified failures are related to Rosemount 1154GP transmitters over the review period for all three units. In four of the six failures, the transmitter was replaced. In five of the six failures, a TS Setpoint was found to exceed its as-found limit. Two of the five failures in which a TS Setpoint exceeded its as-found limit, the failures were on different channels on different units. The remaining three out of tolerance failures were on the same channel and unit on three successive performances in 2003, 2004, and 2006. In two of these three occurrences, the neck seal between the transmitter housing and the differential pressure unit or bellows was broken or loose.

As a result of these repetitive failures, ONS has initiated a corrective action to document the failures and allow for trending of future performances. There does not appear to be a time-based degradation or other condition which would affect the operation or accuracy for these devices. Moreover, considering the total number of Rosemount transmitters in the various systems in all three units, the NRC staff concludes that the total number of failures identified is small and the impact on system availability would be minimal.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibrations 3.3.1.7 Functions 3, 4, 5, 6, 8, 9, 10, and 11 to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data

supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.5 Engineered Safeguards Protective System (ESPS) Input Instrumentation:

SR 3.3.5.4 Perform CHANNEL CALIBRATION.

Parameter 1 Reactor Coolant System Pressure - Low
Parameter 2 Reactor Coolant System Pressure - Low Low
Parameter 3 Reactor Building Pressure - High
Parameter 4 Reactor Building Pressure - High High

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The licensee stated that the test verifies that the channel responds to a measured parameter within the necessary range and accuracy and no revisions to TS allowable values or safety analyses resulted from the GL 91-04 evaluations.

Furthermore, the licensee stated that a review of the applicable ONS surveillance history demonstrated that the instrumentation for these parameters had only two failures of the TS functions that would have been detected solely by the periodic performance of the above SR.

a. On November 25, 1999, during the performance of the SR, as found data for the alarm setpoint was out of tolerance low. The signal monitor could not be adjusted within tolerance. Signal Monitor 2SA-7-37 (EI) was replaced. The transmitter has not failed on a repetitive basis and is not associated with a time-based failure mechanism. No similar failures are identified.

b. On May 12, 2003, during the performance of the SR Rosemount 1153GD9RB transmitter failed due to the response time being noticeably sluggish during testing. The transmitter was replaced. The transmitter has not failed on a repetitive basis and is not associated with a time-based failure mechanism. No similar failures are identified.

The identified failures are unique and did not occur on a repetitive basis and are not associated with a time-based failure mechanism. The NRC staff reviewed the licensee's corrective action associated with the failures and found them acceptable.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.5.4 Parameters 1, 2, 3, and 4 to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.8 Post Accident Monitoring Instrumentation:

SR 3.3.8.3 Perform CHANNEL CALIBRATION.

Function 1 Wide Range Neutron Flux
Function 5 Reactor Vessel Head Level
Function 6 Containment Sump Water Level (Wide Range)
Function 8 Containment Isolation Valve Position

TS 3.3.8 Post Accident Monitoring Instrumentation

SR 3.3.8.3 Perform CHANNEL CALIBRATION.

Function 1 Wide Range Neutron Flux

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The licensee stated that no setpoint or accuracy requirements exist for the subject indication. Although the emergency operating procedures specify that on loss of subcooled margin, if the reactor core power is greater than 1 percent full power (FP), the RCPs should not be tripped, the 1 percent value was arbitrarily chosen and no instrument uncertainties applied. The only requirement for the instrumentation is to function during normal conditions and during and after a design basis event. The indication is more useful to the operator in indicating a change in power rather than indicating the exact Wide Range Power/Rate.

The post accident monitoring (PAM) Wide Range Neutron Flux instrument uncertainties are not applied to any safety analysis limit and are used mainly for trending. Therefore, PAM Wide Range Neutron Flux instrument uncertainties were determined by the licensee to be for information. As such, the PAM Wide Range Neutron Flux instrument loops do not require an AFAL Drift Analysis to support a 24-month fuel cycle.

A review of the applicable ONS surveillance history demonstrated that the instrumentation for this function had one failure of the TS function that would have been detected solely by the periodic performance of the above SR. On April 5, 2008, during the performance of an instrument calibration procedure, power supply voltage was found out of tolerance. The power supply was replaced with new replacement model. During resumption of testing, the wide range monitor breaker tripped off. Troubleshooting found Wide Range Monitor common test jack reading was out of tolerance. The new power supply was suspected as the cause. Technicians replaced the entire monitor and the test/calibration was completed satisfactorily. No similar failures were identified; therefore, the failure is not repetitive in nature. Therefore, this failure is unique. No time-based mechanisms for degradation are apparent.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.8.3 Function 1 Wide Range Neutron Flux to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.8 Post Accident Monitoring Instrumentation:

SR 3.3.8.3 Perform CHANNEL CALIBRATION.

Function 5 Reactor Vessel Head Level

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The licensee stated that the reactor vessel level indication system (RVLIS) is used for determination of emergency operating procedure (EOP) setpoints.

However, the RVLIS head level indication uncertainties are only applicable for setpoints associated with the bottom of the hot leg and the top of reactor vessel. There is insufficient data to perform an AFAL drift analysis for the RVLIS vessel head level. Therefore, the licensee used the same relative uncertainty as the RVLIS hot leg level drift error (i.e., plus or minus (±) 3.92 percent of span) for evaluation of the RVLIS vessel head level setpoints because the RVLIS hot leg indication extended cycle analyzed drift is a reasonable estimate of the RVLIS vessel head level indication extended cycle analyzed drift because both loops share the same equipment, location and function. The only difference between the loops is instrument span. Therefore, the NRC staff finds the use of the RVLIS hot leg level drift error for evaluation of the RVLIS vessel head level setpoints acceptable.

The licensee identified a significant number of out-of-tolerance (OOT) data points. The licensee performed an investigation into the high number of OOT's. The licensee identified the OOT's were caused by certain sections of the capillary tubing being placed under a vacuum when the RVLIS system is isolated and depressurized for calibration during an outage. Normally, the RVLIS is pressurized at RCS operating pressure. The sections exposed to a vacuum are those connected to the decay heat drop line near the transmitter. The licensee suspected that the mechanical fittings associated with this section of capillary tubing allowed air in leakage. As a corrective measure, the licensee changed the RVLIS calibration procedure to provide instructions to pressurize the decay heat capillary lines when calibration is not being performed. This change reduces the amount of time these lines are exposed to a vacuum and thus reducing air in leakage. Since implementation of this procedure change (on April 20, 2002), the OOT's have decreased dramatically.

During the licensee's 24-month fuel cycle extension evaluations, the licensee determined that RVLIS vessel head level performance, although improved since the procedural changes described above, was still not representative of the expected performance of the RVLIS vessel head level instrument loops. The licensee's review of the AFAL calibration data collected to support an instrument drift analysis of reactor vessel head level for 24-month fuel cycles and subsequent inadequate core cooling monitoring (ICCM)/RVLIS engineering support program activities identified a required enhancement to the calibration procedure. Further procedural

enhancements were determined by the licensee to be warranted that will provide further isolation of the RVLIS vessel head level transmitters during RVLIS hot leg level calibrations. The additional isolation will protect the vessel level transmitters from 'sensing' three times their normal differential pressure (DP) during the hot leg level calibrations. Although the Barton 752 transmitters are qualified for overpressure, it is not necessary to subject the RVLIS vessel head level transmitters to this excessive DP. The licensee implemented the procedural change to isolate the RVLIS vessel head level transmitters during calibration of the RVLIS hot leg level transmitters has been implemented. Since the procedural change the performance of the RVLIS vessel head level instrument loop calibration is consistent with the expected loop performance. That is, the setting tolerance for the RVLIS vessel head level operator aid computer (OAC) indication is ± 1.4 percent span and the worst case performance was - 0.51 percent span.

The licensee stated that an AFAL drift analysis of the vessel head level calibration data would be meaningless in light of the above described procedural changes. The data shows continued improvement with each procedural change. The final calibration, which is the only one with both procedural changes, shows the RVLIS head level instrument loops performing well within expected calibration limits. A review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of the TS required channel calibration that would have been detected solely by the periodic performance of this SR. Therefore, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency. Based on the history of system performance, the licensee stated once the 24-month TS surveillance intervals have been approved and implemented, the calibration surveillance procedure review program will verify that future loop/component AFAL calibration values do not exceed those acceptable limits determined in the instrument uncertainty calculations.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending that SR calibration 3.3.8.3 Function 5 Reactor Vessel Head Level to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.
TS 3.3.8 Post Accident Monitoring Instrumentation:

SR 3.3.8.3 Perform CHANNEL CALIBRATION.

Function 6 Containment Sump Water Level (Wide Range)

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR is used for monitoring of containment water level during design basis Loss of Coolant Accident events. EOP guidance relegates the function of the wide range containment water level indication to that of trending only. As such, there are no analytical limits to compare the uncertainties against and the total loop uncertainties are for information only. Additionally, drift is not applicable to the level transmitter due to its design.

Based on the above, the licensee concluded that the PAM Containment Sump Water Level strings do not require an AFAL Drift Analysis to support a 24-month fuel cycle. A review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of the TS required channel calibration that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.8.3 Function 6 Containment Sump Water Level (Wide Range) to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.8 Post Accident Monitoring Instrumentation

SE 3.3.8.3 Perform CHANNEL CALIBRATION

Function 8 Containment Isolation Valve Position

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The licensee stated that this SR verifies that the control switch indicating lights are functioning properly. Containment isolation valve (CIV) position PAM instrumentation consists of limit switches that provide indicating lights in the control room. These limit switches are electro-mechanical device that offer high precision in terms of accuracy and repeatability. These limit switches do not drift. Therefore, limit switches do not require calibration. The CIV position limit switches are not calibrated because once initially installed and tested, there is no variation in their performance that would not be considered an instrument failure.

The licensee stated that based on the above, the PAM Containment Isolation Valve Position strings do not require an AFAL Drift Analysis to support a 24 month fuel cycle. A review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of the TS required channel calibration that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.8.3 Function 8 Containment Isolation Valve Position to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.8 Post Accident Monitoring Instrumentation:

SR 3.3.8.3 Perform CHANNEL CALIBRATION.

Function 2 RCS Hot Leg Temperature
Function 3 RCS Hot Leg Level
Function 4 RCS Pressure (Wide Range)
Function 9 Containment Area Radiation (High Range)
Function 11 Pressurizer Level
Function 12 Steam Generator Water Level
Function 13 Steam Generator Pressure
Function 14 Borated Water Storage Tank Water Level
Function 15 Upper Surge Tank Level
Function 16 Core Exit Temperature
Function 17 Subcooling Monitor
Function 18 HPI System Flow
Function 19 LPI System Flow
Function 21 Emergency Feedwater Flow

The calibration interval of these SR functions is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The licensee stated that no revisions to allowable values or safety analyses resulted from the GL 91-04 evaluations.

The licensee further stated that a review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had eight failures of the TS functions that would have been detected solely by the periodic performance of the above SRs. Of the eight identified failures, two were related to Series Controller Proportional and Integral (P&I) Card; two failures were related to a power up transient after an extended power off period (one for a Signal Comparator card and one for a Signal Isolator card); and the other four were related to a one time occurrence. No similar failures are identified; therefore, the failures were not repetitive in nature. No time-based degradation mechanisms are apparent. Based on the NRC staff review these failures were found to be unique.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibrations 3.3.8.3 for Functions 2, 3, 4, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 21 to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant

maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.9 Source Range Neutron Flux

SR 3.3.9.2 Perform CHANNEL CALIBRATION.

TS 3.3.10 Wide Range Neutron Flux

SR 3.3.10.2 Perform CHANNEL CALIBRATION.

The calibration interval of these SRs is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The licensee stated that these SRs verified that the channel responds to measured parameters within the necessary range and accuracy and leaves the channel adjusted to account for instrument drift to ensure that the instrument channel remains operational between successive tests.

The licensee stated that a review of the applicable ONS surveillance history demonstrated that the Source Range Neutron Flux and Wide Range Neutron Flux instrumentation had six failures of the TS functions that would have been detected solely by the periodic performance of the above SRs. Of the six identified failures, three were related to power supply issues and the other three were related to one of a kind occurrence. No similar failures are identified; therefore, the failures were not repetitive in nature. Therefore, these failures are unique. No time-based degradation mechanisms are apparent. Any subsequent failures would not result in a significant impact on system/component availability. The impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.9.2 and 3.3.10.2 for Source Range and Wide Range Neutron Flux to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.11 Automatic Feedwater Isolation System (AFIS) Instrumentation:

SR 3.3.11.3 Perform CHANNEL CALIBRATION.

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The AFIS is designed to monitor main steam pressure, prevent containment over pressurization, and to limit steam generator tube-to-shell differential temperature of a faulted steam generator following a main steam line break or a feedwater line break downstream of the

containment check valves. Main steam header pressure provides signals to the AFIS circuitry. There are four pressure transmitters per steam generator with each feeding a steam pressure signal to an analog isolation module. The output of the analog isolation module provides an analog signal to a processor module that actuates isolation functions at desired setpoints.

The licensee stated that no revisions to TS allowable values or safety analyses resulted from the GL 91-04 evaluations. The licensee stated that a review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of the TS required channel calibration that would have been detected solely by the periodic performance of this SR.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.11.3 for the AFIS to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.14 Emergency Feedwater (EFW) Pump Initiation Circuitry:

SR 3.3.14.4 Perform CHANNEL CALIBRATION for each loss of main feedwater (LOMF) pump instrumentation channel

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.14.4 assures that the circuitry will trip upon the loss of feedwater flow.

The licensee stated that the pressure switches that are used to actuate the Motor Driven Emergency Feedwater Pumps and the pressure switches that are used to actuate the Turbine Driven Emergency Feedwater Pump were shown to provide acceptable performance assuming uncertainty of plus (+) 20 percent of setting. The worst case accuracy/repeatability of the pressure switches was + 1.33 percent of setting. The actuation delay due to a 20 percent error is < 0.1 second. This is due to the rapid decrease in hydraulic oil pressure after the pump trip. The actuation delay assumed in the safety analysis is 180 seconds. The substantial margin in the uncertainty calculation more than accounts for any 30-month analyzed drift term. Based on the above, the NRC staff finds the Emergency Feedwater Pump Initiation Circuitry strings do not require an AFAL drift analysis to support a 24-month fuel cycle.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had only one failure of the TS function that would have been detected solely by the periodic performance of the above SR. On November 20, 2005, during the performance of an instrument procedure, the time delay relay setpoint was discovered out of tolerance low. The timer would not calibrate, and was replaced with a new Cutler Hammer timer and calibrated satisfactorily. The identified failure was unique, does not occur on a repetitive basis, and is not associated with a time-based failure mechanism. Therefore, the NRC staff finds

this failure is unique and any subsequent failure would not result in a significant impact on system or component availability.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.14.4 for the EFW Pump Initiation Circuitry to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.16 Reactor Building (RB) Purge Isolation:

SR 3.3.16.3 Perform CHANNEL CALIBRATION.

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The instruments associated with the SR are radiation monitors which isolate the reactor building purge system upon detection of high radiation inside the reactor building.

The setpoints used by the licensee are conservative and are more restrictive while the purge is running due to the higher flow rate (the concentration in the vent needs to be lower for a higher flow rate to get the same number of curies per second released). The setpoint calculation methodology does not have an "error" component. The current setpoints from the Offsite Dose Calculation Manual are never approached during normal operations. There are no uncertainty calculations for the Reactor Building Purge - High Radiation instrument loops, because uncertainties are not required for these instruments. Therefore, the licensee concluded that the Reactor Building Purge - High Radiation instrument loops do not require an AFAL Drift Analysis to support a 24-month fuel cycle.

A licensee review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of the instrument loop and the sensor that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.16.3 for the RB Purge Isolation to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.19 Emergency Power Switching Logic (EPSL) 230 kV Switchyard Degraded Grid Voltage Protection (DGVP)

SR 3.3.19.2 Perform a CHANNEL CALIBRATION of the voltage sensing channel with the setpoint allowable value as follows:

Degraded voltage >226 kV and < 229 kV with a time delay of 9 seconds + 1 second.

TS 3.3.20 Emergency Power Switching Logic (EPSL) CT-5 Degraded Grid Voltage Protection (DGVP)

SR 3.3.20.2 Perform a CHANNEL CALIBRATION of the voltage sensing channel with the setpoint allowable value as follows:

a. Degraded voltage >4143 V and <4185 V with a time delay of 9 seconds ± 1 second for the first level undervoltage inputs; and

b. Degraded voltage > 3871 V and < 3901 V for the second level undervoltage inputs.

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.20.2 requires a channel calibration of the analog channel including the sensor.

The licensee stated that no drift terms were specified by the manufacturer for the undervoltage relays used for EPSL Degraded Grid Voltage Protection and the EPSL CT-5 Degraded Grid Voltage Protection functions. The manufacturer ABB, Inc. asserts that drift need not be considered for these relays, if the relays are calibrated on a 2 to 3 year frequency. The maximum calibration interval for a 24-month fuel cycle is 30 months (i.e., < 3 years); therefore, drift need not be considered for the undervoltage relays used for EPSL Degraded Grid Voltage Protection.

A licensee review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of TS required allowable values that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibrations 3.3.19.2 EPSL 230 kV Switchyard Degraded Grid Voltage Protection (DGVP) and 3.3.20.2 Emergency Power Switching Logic (EPSL) CT-5 DGVP to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.27 Low Pressure Service Water (LPSW) Reactor Building (RB) Waterhammer Prevention Circuitry:

SR 3.3.27.3 Perform CHANNEL CALIBRATION.

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SR 3.3.27.3 requires a channel calibration of the analog channel including the sensor.

The licensee stated that no AFAL drift analysis can be performed because this is a new function and there is insufficient data to determine a 30-month analyzed drift value. The LPSW RB Waterhammer Isolation Header Pressure instrument loops were installed in April 2005, May 2004 and May 2006 for Units 1, 2, and 3, respectively. The 24-month fuel cycle AFAL drift data gathering period ended approximately with the spring Unit 1 outage in 2008. Based on an 18-month interval between calibrations, there would be no more than two outages between the install dates and the end of the data gathering period for any unit. The minimum of 30 data points recommended for an AFAL drift evaluation are not available. Thus, the licensee stated there was insufficient data to perform an AFAL drift analysis for the LPSW RB Water-Hammer Isolation Header Pressure instrument loops.

Limited AFAL drift data is available for the current switch setpoint calibrations. Although the TS surveillance is concerned with the current switch setpoints (which initiate the water-hammer protection), the limited results for the OAC indication are informative only. The worst case drift is 0.34 percent span. This is well within expectations since the reference accuracy of the Rosemount Model 1154 pressure transmitter alone is ± 0.25 percent span. The licensee stated that they have extensive experience with the Rosemount Model 1154 pressure transmitter including loops for which there was sufficient AFAL Drift data to perform an analysis. For loops which included a Rosemount 1154, the AFAL drift data support the 24-month cycle extension.

A licensee review of the limited ONS surveillance history available for this function demonstrated that there were no previous failures of TS required allowable values that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.27.3 LPSW RB Waterhammer Prevention Circuitry to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.3.28 Low Pressure Service Water (LPSW) Standby Pump Auto-Start Circuitry:

SR 3.3.28.2 Perform CHANNEL CALIBRATION.

The calibration interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. The LPSW Standby Pump Auto-Start Circuitry starts the standby LPSW Pump to ensure LPSW cooling water is available if a running pump does not restart following a LOOP event and LPSW header pressure does not return to normal values within a predetermined amount of time. For LOOP events, the LPSW System is required to support operability of the station service water (SSW) system, high pressure injection (HPI) pump motors, and motor driven emergency feedwater (MDEFW) motors.

The licensee stated that no revisions to TS allowable values or safety analyses resulted from the GL 91-04 evaluations.

A licensee review of the applicable ONS surveillance history for this function demonstrated that there were no previous failures of TS required allowable values that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency. Based on system design and the history of system performance, the NRC staff finds that impacts on plant safety are small.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.3.28.2 LPSW Standby Pump Auto-Start Circuitry to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.4.12 Low Temperature Overpressure Protection (LTOP) System

SR 3.4.12.7 Perform CHANNEL CALIBRATION for PORV [pressure operated relief valve]

The calibration test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR ensures that the LTOP system PORV is properly calibrated.

The licensee recently modified this system to provide dedicated pressure transmitters for the LTOP channels in April 2008, November 2008 and December 2007, for Units 1, 2, and 3, respectively. The licensee stated a minimum of 30 data points for an AFAL drift evaluation are not available. Thus, the licensee stated there was insufficient data to perform an AFAL drift analysis for the LTOP pressure transmitter instrument loops.

The licensee did an evaluation and compared the LTOP pressure transmitters to similar pressure transmitters used in the RPS and RCS. The licenses determined that the RPS and RCS pressure transmitters were shown acceptable for use with extended fuel cycle. Therefore, it can be concluded that the new LTOP dedicated Pressure Transmitters will also be acceptable for use with extended fuel cycles.

Including the RPS and RCS pressure loops, there was sufficient AFAL Drift data for the licensee to perform an analysis for the loops, with the pressure transmitters. In each case the AFAL Drift data supported the 24-month cycle extension.

A review of the limited ONS surveillance history available for this function demonstrated that there were no previous failures of TS required allowable values that would have been detected solely by the periodic performance of this SR. As such, the impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency. Based on system design and the history of system performance, the impact of this change on safety, if any, is small.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.4.12.7 Perform CHANNEL CALIBRATION for the PORV to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.4.15 Reactor Coolant System (RCS) Leakage Detection Instrumentation

SR 3.4.15.3 Perform CHANNEL CALIBRATION of required containment sump level detection indications.

SR 3.4.15.4 Perform CHANNEL CALIBRATION of required containment atmosphere radioactivity monitor.

The surveillance test interval of these SRs is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. These SRs verify that leakage from the RCS can be detected so that corrective actions can be taken for excessive leakage.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR frequencies for SR 3.4.15.3, and SR 3.4.15.4 to once per 24 months is acceptable. The NRC staff approves the revised SRs in TS 3.4.1 based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of this revision.

TS 3.9.2 Nuclear Instrumentation

SR 3.9.2.2 Perform CHANNEL CALIBRATION

The calibration test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. This SR ensures that the nuclear instrumentation circuits are properly calibrated including the instrumentation.

The licensee review of the applicable ONS surveillance history data found that the instrumentation for this function had only one failure of the TS functions that would have been detected solely by the periodic performance of the above SR. On April 5, 2008, during the performance of an instrument procedure, power supply ripple voltage was found out of tolerance. The power supply was replaced with new replacement model Lambda HDB12-15. During resumption of testing, Wide Range Monitor breaker CB1 tripped off. Troubleshooting by the licensee found the Wide Range Monitor common test jack reading 25 VDC. The new power supply was suspected as the cause. The licensee replaced the entire 1 NI-3 Wide Range Monitor from supply, and the test/calibration was completed satisfactorily. The identified failure has not occurred on a repetitive basis, and is not associated with a time-based failure mechanism. The impact, if any, on system availability is minimal from the proposed change to a 24-month testing frequency. Based on the history of system performance and the corrective action for the failure, the impact of this change on safety, if any, is small.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.9.2.2 to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

TS 3.10.1 Standby Shutdown Facility (SSF)

SR 3.10.1.13 Perform CHANNEL CALIBRATION for each required SSF instrument channel.

The surveillance test interval of this SR is to be increased from once every 18 months to once every 24 months, for a maximum interval of 30 months including the TS SR 3.0.2 allowed 25 percent interval extension. SSF Instrumentation is provided to monitor RCS pressure, RCS Loop A and B temperature (hot leg and cold leg), pressurizer water level, and SG A and B water level. Indication is displayed on the SSF control panel.

The licensee's review of the applicable ONS surveillance history demonstrated that the instrumentation for these functions had no failures of the TS functions that would have been detected solely by the periodic performance of the above SR. The licensee concluded that the impact on system availability is minimal from the proposed change to a 24-month testing frequency, the impact of this change on safety is small, and the licensing basis would not be invalidated by increasing the surveillance interval.

The NRC staff reviewed the proposed change and the licensee's justification for the change, and determined that all actions specified in GL 91-04 were completed. The effect on safety would be insignificant, historical data does not contradict this conclusion, and no assumptions in the plant licensing basis would be invalidated.

The NRC staff finds extending SR calibration 3.10.1.13 to once per 24 months is acceptable. The NRC staff's conclusions are based on, 1) consistency with the guidance provided in the GL 91-04, 2) historical plant maintenance and surveillance data supporting the conclusion, and 3) that the assumptions in the plant licensing-basis would not be invalidated as a result of proposed change.

4.0 SUMMARY

The NRC staff has reviewed the licensee's request of proposed revisions to the TS SRs to support the implementation of a 24-month fuel cycle for the ONS 1/2/3. The NRC staff evaluated the proposed LAR to determine whether applicable regulations and requirements continue to be met. The NRC staff found that the proposed changes do not require any exemptions or relief from regulatory requirements. Applicable regulatory requirements will continue to be met, adequate defense-in-depth will be maintained, and sufficient safety margins will be maintained.

Therefore, the NRC staff finds the licensee's proposed TS changes to be acceptable based on existing applicable regulations, and NRC guidance. The NRC staff finds that reasonable assurance exists that the impact of the interval extensions on safety would be small.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the South Carolina State official was notified of the proposed issuance of the amendments. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on September 7, 2010 (75 FR 54394). The amendment also relates to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusions set forth in 10 CFR 51.22(c)(9) and (c)(10). 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.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (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 to the health and safety of the public.

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Date: April 20, 2012

If you have any questions, please call me at 301-415-1345.

Sincerely,

/RA/

John Stang, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosures:
1. Amendment No. 379 to DPR-38
2. Amendment No. 381 to DPR-47
3. Amendment No. 380 to DPR-55
4. Safety Evaluation

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