



February 21, 2006

L-2006-057
10 CFR 50.90

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment
Adoption of STS Actions for Excessive Containment Purge Valve Leakage

On February 15, 2006, Florida Power and Light Company (FPL) verbally requested a Notice of Enforcement Discretion (NOED) for St. Lucie Unit 2 because compliance with Technical Specification (TS) 3.6.1.7 ACTION c would require a plant shutdown to repair an 8-inch containment purge supply isolation valve. The NRC verbally approved the NOED during the February 15, 2006 teleconference at 1500 hours to allow enforcement discretion for ACTION c of TS 3.6.1.7 in order to permit the use of a blind flange as an alternate means of isolating the containment purge flowpath.

In letter L-2006-056 dated February 17, 2006, St. Lucie confirmed the verbal commitment made during the teleconference to submit a permanent TS change that will meet the intent of the Combustion Engineering Standard Technical Specifications actions for excessive containment purge valve leakage by February 21, 2006. Pursuant to 10 CFR 50.90, FPL requests to amend Facility Operating License NPF-16 for St. Lucie Unit 2 by incorporating the attached Technical Specification (TS) revision. The proposed amendment will permit the use of a blind flange as an alternate means of isolating a containment purge flowpath that has a leaking isolation valve.

This amendment meets the requirements set forth in 10 CFR 50.90(a)(6)(vi) for exigent circumstances because the valve failure that occurred during the surveillance could not be anticipated. Continued operation with the blind flange installed was approved under the NOED process. The NOED guidance in RIS 2005-01 and NRC Inspection Manual Part 9900: Technical Guidance, Operations – Notices of Enforcement Discretion, requires that the permanent amendment that would allow continued operation be submitted within 4 days of the verbal NOED approval.

Attachment 1 is an evaluation of the proposed changes. Attachment 2 is the "Determination of No Significant Hazards Consideration." Attachment 3 contains the affected Technical Specifications pages marked-up to show the proposed changes. Attachment 4 contains the word-processed TS changes.

The St. Lucie Facility Review Group and the FPL Company Nuclear Review Board have reviewed the proposed amendments. In accordance with 10 CFR 50.91(b)(1), copies of the proposed amendments are being forwarded to the State Designee for the State of Florida.

Because continued operation with a blind flange installed was approved under the NOED process, FPL requests that the amendment be approved no later than March 24, 2006. Furthermore, FPL requests that the amendment be effective upon NRC approval, with immediate implementation.

Please contact Mr. Terry Patterson at (772) 467-7162 or Mr. Ken Frehafer at (772) 467-7748 if there are any questions on this matter.

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

Executed on 21st day of February 2006.

Very truly yours,



J. A. Stall
Senior Vice President, Nuclear and
Chief Nuclear Officer

JAS/KWF

Attachment

St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment
Adoption of STS Actions for Excessive Containment Purge Valve Leakage

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Evaluation of Proposed Changes

INTRODUCTION

Florida Power and Light Company (FPL) proposes to revise Action c of St. Lucie Unit 2 Technical Specification (TS) 3.6.1.7 to be consistent with the provisions of Condition E of Specification 3.6.3 of NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants." Action c of St. Lucie Unit 2 Technical Specification 3.6.1.7 requires that, "With a containment purge supply and/or exhaust valve(s) having a measured leakage rate exceeding the limits of Surveillance Requirements 4.6.1.7.3 and/or 4.6.1.7.4, restore the inoperable valve(s) to OPERABLE status within 24 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours." Condition E of Specification 3.6.3 of NUREG-1432 allows for isolation of the affected penetration flow path by use of at least one closed and de-activated automatic valve with resilient seals or blind flange.

BACKGROUND

At 1610 hours on February 14, 2006, the St. Lucie Unit 2 inboard 8-inch containment purge supply isolation valve, FCV-25-36, failed TS surveillance requirement 4.6.1.7.4 which requires that:

"At least once per 92 days, each 8-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.05 L_a$ when pressurized to P_a ."

TS 3.6.1.7 Action c was entered which requires:

"With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Surveillance Requirements 4.6.1.7.3 and/or 4.6.1.7.4, restore the inoperable valve(s) to OPERABLE status within 24 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

As a result of the suspected failure mode of the isolation valve and obstacles involved with the valve repair, it was not possible for the valve to be restored to OPERABLE status within the required 24 hours. In order to avoid an unnecessary transient as a result of compliance with TS 3.6.1.7 Action c, St. Lucie requested a Notice of Enforcement Discretion (NOED) which was verbally granted by NRC at 1500 hours on February 15, 2006. Submittal of this License Amendment Request is consistent with the NOED and the commitment to submit an exigent permanent License Amendment Request within 4 working days of NRC verbally granting the NOED.

DESCRIPTION OF PROPOSED CHANGES

Limiting Condition for Operation

The following changes are proposed to Technical Specification 3.6.1.7 Action c:

- Add the provision that, with a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Surveillance Requirements 4.6.1.7.3 and/or 4.6.1.7.4, the affected penetration flow path may be isolated by use of at least one closed and de-activated automatic valve with resilient seals (tested for seat leakage) or blind flange and verification that the path is isolated within 24 hours.
- Add substep 1 to Action c that Closed and de-activated automatic valve(s) with resilient seals used to isolate the penetration flowpath(s) shall be tested in accordance with either Surveillance Requirement 4.6.1.7.3 for 48-inch valves at least once per 6 months or Surveillance Requirement 4.6.1.7.4 for 8-inch valves at least once per 92 days.
- Add substep 2 to Action c that will verify* the affected penetration flowpath is isolated once per 31 days for isolation devices outside containment and prior to entering MODE 4 from MODE 5 for isolation devices inside containment if not performed within the previous 92 days.
- Add notation that verification for isolation devices performed during Action c substep 2 may be done by use of administrative means when they are located in high radiation areas, and isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.

JUSTIFICATION OF THE PROPOSED CHANGE

The containment purge valves are part of the containment purge and/or the continuous purge/hydrogen purge systems. The containment purge and continuous purge/hydrogen purge systems are not required for safe shutdown of the reactor or to mitigate the consequences of a design basis accident. The containment purge system is designed to reduce the level of radioactive contamination in the containment atmosphere below the limits of 10 CFR 20 so as to permit personnel access to the containment during shutdown and refueling. The continuous purge/hydrogen purge system can be used as a not-nuclear-safety backup to the redundant safety-related hydrogen recombiners which maintain containment hydrogen concentration below 4% after a postulated accident. The only portions of the purge systems that are safety-related are the containment penetrations and the isolation valves.

The proposed changes to TS 3.6.1.7 Action c will allow isolation of a containment purge supply and/or exhaust penetration using a closed and de-activated automatic valve with resilient seals or a blind flange in the event that one or more containment purge valves are not within valve leakage limits. These actions are consistent with the applicable required actions for Condition E of Specification 3.6.3 of NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants."

Use of a blind flange or a closed and de-activated automatic valve with resilient seals in lieu of a failed isolation valve is acceptable since the blind flange or closed and de-activated valve provides an equivalent isolation function, thereby ensuring that the affected penetration's containment isolation safety function continues to be satisfied.

There are no nuclear safety concerns with respect to the inability to operate the 48-inch or 8-inch containment purge systems in the event use of a blind flange or closed and deactivated valve becomes necessary as a result of a failed leak rate test. Per TS 3.6.1.7, the 48-inch purge system isolation valves shall be sealed closed (i.e., cannot be operated) in Modes 1, 2, 3 and 4. The 8-inch purge system may be open for purging/venting during plant operations in accordance with TS 3.6.1.7; however, per UFSAR Sections 6.2.5 and 9.4.8.8, this system is not credited for any safety-related functions other than containment isolation.

Adding these additional options within the TS action may allow the plant to avoid an unnecessary transient as a result of compliance with the current provisions TS 3.6.1.7 Action c.

The addition of proposed substep 1 to TS 3.6.1.7 ACTION c is consistent with the NUREG-1432 requirements for performing the periodic local leak rate surveillances for closed and deactivated automatic valve with resilient seals used as penetration flowpath isolation devices.

The addition of proposed substep 2 to TS 3.6.1.7 ACTION c is consistent with the NUREG-1432 requirements for performing the periodic verification for inside and outside containment penetration isolation devices that are periodically verified. Additionally, the asterisk provides clarification that the periodic verification activities that are performed under substep 2 are allowed to be done via administrative means.

The Surveillance Requirements (SR) of NUREG-1432 were reviewed to ensure no additional changes to the St. Lucie TS are warranted when adopting the TS changes proposed herein. This review identified two NUREG-1432 SRs that do not exist in the St. Lucie TS and are not included in this LAR. These are SRs 3.6.3.2 and 3.6.3.8.

NUREG-1432 SR 3.6.3.2 requires each 8-inch purge valve to be verified closed every 31 days, except when opened for pressure control, ALARA, or air quality considerations or for surveillances that require the valves to be open. The St. Lucie TS do not include such a SR. A similar SR is not necessary for the St. Lucie TS because the current St. Lucie TS LCO 3.6.1.7.b, in conjunction with TS 3.6.1.7 Action b, requires the 8-inch purge supply and exhaust isolation valves to be closed, except for use as delineated in the LCO. The St. Lucie TS obviates the need for such a surveillance.

NUREG-1432 SR 3.6.3.8 requires every 18 months that each 48-inch purge valve be verified blocked to restrict the valves' opening stroke. The St. Lucie TS do not include such a SR. A similar SR is not necessary for the St. Lucie TS because current St. Lucie TS 3.6.1.7.a requires the 48-inch purge supply and exhaust isolation valves to be sealed closed. The St. Lucie LCO obviates the need for such a surveillance.

Applicable Regulatory Requirements/Criteria

NUREG-1432, Standard Technical Specifications Combustion Engineering Plants, is, by definition, endorsed by the NRC. The Preface to this NUREG states that "Licensees are encouraged to upgrade their technical specifications consistent with those criteria and conforming, to the practical extent, to Revision 3 to the improved STS."

CONCLUSIONS

The proposed changes are acceptable. The proposed revisions of Action c of St. Lucie Unit 2 Technical Specification 3.6.1.7 are consistent with the provisions of Condition E of Specification 3.6.3 of NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants." Adoption of the provisions of Condition E of Specification 3.6.3 of NUREG-1432 provides additional actions which may be taken in the event that a containment purge supply and/or exhaust isolation valve(s) has a measured leakage rate exceeding the limits of Surveillance Requirements. These additional actions may avoid an unnecessary transient as a result of compliance with the current provisions TS 3.6.1.7 Action c.

No Significant Hazards Determination
And
Environmental Consideration
Evaluations

NO SIGNIFICANT HAZARDS DETERMINATION

The Nuclear Regulatory Commission provides standards for determining whether a significant hazards consideration will exist (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed below for the proposed amendment.

- (1) Operation of the facility in accordance with the proposed amendments would not involve a significant increase in the probability or consequences of an accident previously evaluated.**

The proposed change to the St. Lucie Unit 2 Technical Specifications will allow isolation of the affected penetration using a closed and de-activated automatic valve with resilient seals or a blind flange in the event that one or more containment purge valves are not within valve leakage limits. This action is consistent with the applicable required actions for Condition E of Specification 3.6.3 of NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants." The containment purge valves are part of the containment purge and/or the continuous purge/hydrogen purge systems. The containment purge valves are not accident initiators. In addition, neither the containment purge nor the continuous purge/hydrogen purge systems are required for safe shutdown of the reactor or to mitigate the consequences of a design basis accident. The containment purge system is designed to reduce the level of radioactive contamination in the containment atmosphere below the limits of 10 CFR 20 so as to permit personnel access to the containment during shutdown and refueling. The continuous purge/hydrogen purge system is used as a not-nuclear-safety backup to the redundant safety-related hydrogen recombiners which maintain containment hydrogen concentration below 4% after a postulated accident.

Use of a closed and de-activated automatic valve with resilient seals or a blind flange to isolate a failed penetration provides a barrier to the release of radioactivity for those accidents previously evaluated. Therefore, operation of the facility in accordance with the proposed amendments does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (2) Operation of the facility in accordance with the proposed amendments would not create the possibility of a new or different kind of accident from any accident previously evaluated.**

The containment purge valves are not accident initiators. Use of a closed and de-activated automatic valve with resilient seals or a blind flange to isolate a failed penetration does not introduce any new failure modes. Therefore, operation of the facility in accordance with the proposed amendments does not create the possibility of a new or different kind of accident from any accident previously evaluated.

- (3) Operation of the facility in accordance with the proposed amendments would not involve a significant reduction in a margin of safety.**

Use of a closed and de-activated automatic valve with resilient seals or a blind flange to isolate a failed penetration will ensure that the penetration's pressure retention containment isolation safety function continues to be satisfied. There will be no decrease in the ability of the containment purge or the continuous purge/hydrogen purge systems to perform their containment isolation safety function as assumed in the accident analyses. In addition, use of a closed and de-activated automatic valve with resilient seals or a blind flange to isolate a failed containment purge penetration is consistent with the provisions of Condition E of Specification 3.6.3 of NUREG-1432. Therefore, operation of the facility in accordance with the proposed amendments will not involve a significant reduction in a margin of safety.

Based on the above discussion, FPL has determined that the proposed amendment request does not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety; therefore, the proposed changes do not involve a significant hazards consideration as defined in 10 CFR 50.92.

ENVIRONMENTAL CONSIDERATION

The proposed license amendments do not change requirements with respect to the use of a facility component located within the restricted area as defined in 10 CFR Part 20. The proposed amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and no significant increase in individual or cumulative occupational radiation exposure. FPL concluded that the proposed amendments involve no significant hazards consideration and meet the criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and that, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment need not be prepared in connection with issuance of the amendments.

CONCLUSION

FPL concludes, 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

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TS Markup

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CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each containment purge supply and exhaust isolation valve shall be OPERABLE and:

- a. Each 48-inch containment purge supply and exhaust isolation valve shall be sealed closed.
- b. The 8-inch containment purge supply and exhaust isolation valves may be open for purging and/or venting as required for safety related purposes such as:
 1. Maintaining containment pressure within the limits of Specification 3.6.1.4.
 2. Reducing containment atmosphere airborne radioactivity and/or improving air quality to an acceptable level for containment access.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With a 48-inch containment purge supply and/or exhaust isolation valve(s) open or not sealed closed, close and/or seal close the open valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With an 8-inch containment purge supply and/or exhaust isolation valve(s) open for reasons other than those stated in Specification 3.6.1.7.b, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Surveillance Requirements 4.6.1.7.3 and/or 4.6.1.7.4, restore the inoperable valve(s) to OPERABLE status within 24 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

within 24 hours either

INSERT 1

INSERT 2

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 Each 48-inch containment purge supply and exhaust isolation valve shall be verified to be sealed-closed at least once per 31 days.

4.6.1.7.2 Documentation shall be reviewed every 18 months to confirm that purging and venting were performed in accordance with Specification 3.6.1.7.b.

4.6.1.7.3 At least once per 6 months on a STAGGERED TEST BASIS each sealed closed 48-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.05 L_a$ when pressurized to P_a .

4.6.1.7.4 At least once per 92 days, each 8-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.05 L_a$ when pressurized to P_a .

Insert 1:

or isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve with resilient seals or blind flange, verify the affected penetration flowpath is isolated, and perform Surveillance Requirement 4.6.1.7.3 or 4.6.1.7.4 for resilient seated valves closed to isolate the penetration flowpath

Insert 2:

1. Closed and de-activated automatic valve(s) with resilient seals used to isolate the penetration flowpath(s) shall be tested in accordance with either Surveillance Requirement 4.6.1.7.3 for 48-inch valves at least once per 6 months or Surveillance Requirement 4.6.1.7.4 for 8-inch valves at least once per 92 days.
2. Verify* the affected penetration flowpath is isolated once per 31 days for isolation devices outside containment and prior to entering MODE 4 from MODE 5 for isolation devices inside containment if not performed within the previous 92 days.

Insert 3:

*Verification of isolation devices by administrative means is acceptable when they are located in high radiation areas or they are locked, sealed, or otherwise secured by administrative means.

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Word Processed TS

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CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each containment purge supply and exhaust isolation valve shall be OPERABLE and:

- a. Each 48-inch containment purge supply and exhaust isolation valve shall be sealed closed.
- b. The 8-inch containment purge supply and exhaust isolation valves may be open for purging and/or venting as required for safety related purposes such as:
 1. Maintaining containment pressure within the limits of Specification 3.6.1.4.
 2. Reducing containment atmosphere airborne radioactivity and/or improving air quality to an acceptable level for containment access.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With a 48-inch containment purge supply and/or exhaust isolation valve(s) open or not sealed closed, close and/or seal close the open valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With an 8-inch containment purge supply and/or exhaust isolation valve(s) open for reasons other than those stated in Specification 3.6.1.7.b, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Surveillance Requirements 4.6.1.7.3 and/or 4.6.1.7.4, within 24 hours either restore the inoperable valve(s) to OPERABLE status or isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve with resilient seals or blind flange, verify the affected penetration flowpath is isolated, and perform Surveillance Requirement 4.6.1.7.3 or 4.6.1.7.4 for resilient seated valves closed to isolate the penetration flowpath, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 1. Closed and de-activated automatic valve(s) with resilient seals used to isolate the penetration flowpath(s) shall be tested in accordance with either Surveillance Requirement 4.6.1.7.3 for 48-inch valves at least once per 6 months or Surveillance Requirement 4.6.1.7.4 for 8-inch valves at least once per 92 days.
 2. Verify* the affected penetration flowpath is isolated once per 31 days for isolation devices outside containment and prior to entering MODE 4 from MODE 5 for isolation devices inside containment if not performed within the previous 92 days.

* Verification of isolation devices by administrative means is acceptable when they are located in high radiation areas or they are locked, sealed, or otherwise secured by administrative means.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION (continued)

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 Each 48-inch containment purge supply and exhaust isolation valve shall be verified to be sealed-closed at least once per 31 days.

4.6.1.7.2 Documentation shall be reviewed every 18 months to confirm that purging and venting were performed in accordance with Specification 3.6.1.7.b.

4.6.1.7.3 At least once per 6 months on a STAGGERED TEST BASIS each sealed closed 48-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.05 L_a$ when pressurized to P_a .

4.6.1.7.4 At least once per 92 days, each 8-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.05 L_a$ when pressurized to P_a .