St. Lucie Unit 1
Docket No. 50-335
Proposed License Amendment
St. Lucie Unit 1 Containment
Penetrations Surveillance Requirement

ATTACHMENT 1

ST. LUCIE UNIT 1 MARKED-UP TECHNICAL SPECIFICATION PAGE

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3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 CONTAINMENT VESSEL

CONTAINMENT VESSEL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 CONTAINMENT VESSEL INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without CONTAINMENT VESSEL INTEGRITY, restore CONTAINMENT VESSEL INTEGRITY within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 CONTAINMENT VESSEL INTEGRITY shall be demonstrated:

a. At least once per 31 days by verifying that:

1. All containment vessel penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except as provided in Table 3.6-2 of Specification 3.6.3.1, and

2. All containment vessel equipment hatches are closed and sealed.

b. By verifying that each containment vessel air lock is OPERABLE per Specification 3.6.1.3.

* ~~Not required for penetrations inside containment during fuel cycle 11.~~

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CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of:

1. $\leq L_a$, 0.50 percent by weight of the containment air per 24 hours at P_a, (39.6 psig), or

2. $\leq L_t$, 0.32 percent by weight of the containment air per 24 hours at a reduced pressure of P_t, (19.8 psig).

b. A combined leakage rate of $\leq 0.60\ L_a$ for all penetrations and valves subject to Type B and C tests as identified in Table 3.6-1 when pressurized to P_a.

c. A combined leakage rate of $\leq 0.27\ L_a$ for all penetrations identified in Table 3.6-1 as secondary containment bypass leakage paths when pressurized to P_a.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75\ L_a$ or $0.75\ L_t$, as applicable, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, or (c) with the combined bypass leakage rate exceeding $0.27\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50:

a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at either P_a (39.6 psig) or at P_t (19.8 psig) during each 10-year

DEC 19 1988

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of:

1. $\leq L_a$, 0.50 percent by weight of the containment air per 24 hours at P_a, (39.6 psig), or

2. $\leq L_t$, 0.32 percent by weight of the containment air per 24 hours at a reduced pressure of P_t, (19.8 psig).

b. A combined leakage rate of $\leq 0.60\ L_a$ for all penetrations and valves subject to Type B and C tests as identified in Table 3.6-1 when pressurized to P_a.

c. A combined leakage rate of $\leq 0.27\ L_a$ for all penetrations identified in Table 3.6-1 as secondary containment bypass leakage paths when pressurized to P_a.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75\ L_a$ or $0.75\ L_t$, as applicable, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, or (c) with the combined bypass leakage rate exceeding $0.27\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50:

a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at either P_a (39.6 psig) or at P_t (19.8 psig) during each 10-year

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Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

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ATTACHMENT 2

SAFETY ANALYSIS

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SAFETY ANALYSIS

Introduction

Florida Power and Light Company (FPL) proposes to modify St. Lucie Unit 1 Technical Specification (TS) 4.6.1.1.a.1, Containment Integrity Surveillance Requirements, by excluding penetrations inside containment from the integrity verification that is required at least once per 31 days. The provision to exclude verification of penetrations inside containment is necessary because some components are inaccessible during reactor operation or are located in areas of high radiation fields. The proposed change to TS 4.6.1.1.a.1 reads like the corresponding TS approved for St. Lucie Unit 2.

Discussion

In Modes 1, 2, 3, and 4, TS 4.6.1.1.a requires, in part, that Containment Vessel Integrity shall be demonstrated at least once per 31 days by verifying that: " 1. All containment vessel penetrations not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except as provided in Table 3.6-2 of Specification 3.6.3.1."

Some of these components inside containment are inaccessible or are in areas of high radiation fields. A TS change is necessary to avoid radiation dose to those employees who would be required to check these components inside containment. Accordingly, the proposed amendment will exclude valves, blind flanges, and deactivated automatic valves which are located inside containment and are locked, sealed or otherwise secured in their closed positions from the 31 day surveillance of containment penetrations.

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Safety Assessment

Corrective actions for Unit 1 delineated in FPL's revised response (FPL letter L-93-046) to a Notice of Violation (Inspection Report 92-21) will be completed by the end of the 1993 Spring Refueling Outage. These actions include installation of locking devices and other measures, as appropriate, on penetration components inside containment to satisfy the condition of being secured in their proper positions.

During plant startup from cold shutdown, all containment vessel penetrations not capable of being closed by operable containment automatic isolation valves and required to be closed during accident conditions will be verified closed by valves, blind flanges, or deactivated automatic valves which are locked, sealed or otherwise secured in their proper positions prior to entry into Mode 4 where containment integrity is required. These conditions will be verified using approved system valve lineup procedures, local leak rate post test valve lineups, and containment integrity surveillance valve lineups.

Containment access during reactor operation is restricted physically by locked hatches which are annunciated in the control room when any containment hatch is opened. Administrative controls restrict entries into Unit 1 containment to anomaly inspections, typically 2 per month, that inspect the accessible areas of containment for any unusual conditions. Work that may require containment access during unplanned, short notice outages is normally limited in scope. Since configuration control on all plant systems is achieved through approved plant procedures, the equipment clearance order procedure, and/or the locked valve deviation log, the anomaly inspections or the outage activities will not reduce the effectiveness of containment integrity.

Surveillance Requirement (SR) 4.6.1.1.a.1 involves only verification, through a system walkdown, that applicable components are secured in their correct positions. Since access to the containment is typically restricted during modes 1, 2, 3, and 4 for ALARA reasons, FPL considers that the probability of misalignment of these components, once they have been verified to be in the proper position, is small.

For valves and blind flanges inside containment, the proposed verification frequency of "during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days" is considered appropriate since these valves and flanges are operated under administrative controls and the probability of their misalignment is low.

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The proposed amendment is identical to the provision that excludes verification of penetrations inside containment from the corresponding 31 day SR in the approved TS for St. Lucie Unit 2. This provision was found acceptable for Unit 2 as part of the licensing basis for that plant. The administrative controls and other factors contributing to the acceptability of the exclusion provision for Unit 2 are equally applicable to St. Lucie Unit 1.

Based on the above discussions, FPL considers that the probability of misalignment of penetration components located inside containment, once they have been verified to be properly aligned, is small. Moreover, the proposed amendment and associated bases are consistent with NUREG-1432, Rev. 0 (09/28/92), "Standard Technical Specifications for Combustion Engineering Plants". Therefore, FPL concludes that operation of St. Lucie Unit 1 in accordance with the proposed amendment is acceptable.

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DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Pursuant to 10CFR50.92, a determination may be made that a proposed license amendment 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 as follows:

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

Strict control of containment entries, measures being taken to ensure that penetration components are locked, sealed or otherwise secured in their closed positions, and the administrative controls that assure a low probability of valve misalignments described in the supporting safety analysis for the proposed amendment provide assurance that containment integrity is preserved without performing the 31 day verification surveillance inside containment. Therefore, operation of the facility in accordance with the proposed amendment will 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 amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

This amendment does not result in any change to the physical plant or in the mode of operation of the plant. Therefore, operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

Penetration components inside containment are operated under administrative control and entries into containment are restricted. Certain penetration components, as appropriate, are locked, sealed or otherwise secured in their proper positions to assure containment integrity during Operating Modes 1, 2, 3, and 4. Therefore, operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

Based on the discussion presented above and on the supporting safety analysis, FPL has concluded that this proposed license amendment involves no significant hazards consideration.