TSI 64

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

a. All penetrations required to be closed during accident conditions are either:

1) Capable of being closed by an OPERABLE containment automatic isolation valve system, or

2) Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Table 3.6-1 of Specification 3.6.3.

b. All equipment hatches are closed and sealed.

c. Each air lock is in compliance with the requirements of Specification 3.6.1.3.

d. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

e. The containment leakage rates are determined per Specification 4.6.1.1.d and are within the limits listed in the ~~Bases of Specification 3.6.1.1.~~ Containment Leakage Rate Testing Program of Specification 6.8.4g.

f. Structural integrity is assured via the program described in Specification 6.8.5.c.

CONTROLLED LEAKAGE

1.8 CONTROLLED LEAKAGE shall be that seal water flow from the reactor coolant pump seals.

CORE ALTERATION

1.9 CORE ALTERATION shall be the movement or manipulation of any component within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe conservative position.

CORE OPERATING LIMITS REPORT

1.10 The CORE OPERATING LIMITS REPORT (COLR) is the unit specific document that provides core operating limits for the current operating reload cycle. The cycle specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1.9. Plant operation within these operating limits is addressed in individual specifications.

DOSE EQUIVALENT I-131

1.11 DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microCurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites."

TSI 57

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 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 Primary CONTAINMENT INTEGRITY shall be demonstrated:

a. At least once per 31 days by verifying that all penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Table 3.6-1 of Specification 3.6.3;

b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3;

c. After each closing of each penetration subject to Type B testing, except the containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at a pressure not less than P_a, 48.1 psig, and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.1.d for all other Type B and C penetrations, the combined leakage rate is less than 0.60 L_a; DELETED

d. By performing containment leakage rate testing ~~except for containment air locks~~ in accordance with ~~10 CFR 50, Appendix J, as modified by approved exemptions~~; and the Containment Leakage Rate Testing Program of Specification 6.8.4.g

e. By verifying containment structural integrity in accordance with the Containment Tendon Surveillance Program of Specification 6.8.5.c.

* 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.

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

a. Both doors closed except when the air lock is being used for normal transit entry and exits through the containment, then at least one air lock door shall be closed, and

b. An overall air lock leakage rate of less than or equal to 0.05 L_a at P_a, 48.1 psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one containment air lock door inoperable:

1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed,

2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days,

3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and

4. The provisions of Specification 3.0.4 are not applicable.

b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

L 50.02

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

a. Within 72 hours following each closing, except when the air lock is being used for multiple entries, then at least once per 72 hours, by verifying that the seal leakage is less than $0.005 L_a$ as determined by precision flow measurements when measured for at least 30 seconds with the volume between the seals at a constant pressure of greater than or equal to 10 psig;

b. By conducting overall air lock leakage tests at not less than P_a, 48.1 psig, and verifying the overall air lock leakage rate is within its limit:

1) At least once per 6 months,# and

2) Prior to establishing CONTAINMENT INTEGRITY when maintenance has been performed on the air lock that could affect the air lock sealing capability.*

c. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.

a. By verifying leakage rates in accordance with the Containment Leakage Rate Testing Program of Specification 6.8.4g; and

#The provisions of Specification 4.0.2 are not applicable.
*This represents an exemption to Appendix J, Paragraph III.D.2.(b)(ii), of 10 CFR Part 50.

PROCEDURES AND PROGRAMS (Continued)

f. Radiological Environmental Monitoring Program (Continued)

3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

INSERT A →

6.8.5 ~~The~~ following programs, relocated from the Technical Specifications to FSAR Chapter 16, shall be implemented and maintained:

a. Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the WASTE GAS HOLDUP SYSTEM, the quantity of radioactivity contained in gas storage tanks, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks.

The program shall include:

1. The limits for concentrations of hydrogen and oxygen in the WASTE GAS HOLDUP SYSTEM and a surveillance program to ensure the limits are maintained.

2. A surveillance program to ensure that the quantity of radioactivity contained in each gas storage tank is less than the amount that would result in a whole body exposure of $\geq$ 0.5 rem to a MEMBER OF THE PUBLIC at the nearest SITE BOUNDARY in the event of an uncontrolled release of the tanks' contents, consistent with Branch Technical Position ETSB 11-5, "Postulated Radioactive Releases due to Waste Gas System Leak or Failure," in NUREG-0800, July 1981.

3. A surveillance program to ensure that the quantity of radioactivity contained in the following outdoor liquid radwaste tanks, that are not surrounded by liners, dikes, or walls capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the liquid radwaste system, is less than the amount that would result in concentrations less than the limits of 10 CFR Part 20.1 -20.602, Appendix B (redesignated at 56FR23391, May 21, 1991) at the nearest potable water supply and the nearest surface water supply in an UNRESTRICTED AREA, in the event of an uncontrolled release of the tanks' contents:

   a. Reactor Makeup Water Storage Tank,
   b. Refueling Water Storage Tank,
   c. Condensate Storage Tank, and
   d. Outside temporary tanks, excluding demineralizer vessels and the liner being used to solidify radioactive waste.

INSERT A

g. Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a, is 48.1 psig.

The maximum allowable containment leakage rate, L_a, at P_a, shall be 0.20% of the containment air weight per day.

Leakage rate acceptance criteria are:

a. Containment leakage rate acceptance criterion is $\leq 1.0\ L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60\ L_a$ for the Type B and C tests and $\leq 0.75\ L_a$ for Type A tests;

b. Air lock testing acceptance criteria are:

   1) Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$;

   2) For each door, leakage rate is $\leq 0.005\ L_a$ when pressurized to $\geq$ 10 psig.

The provisions of Technical Specification 4.0.2 do not apply to the test frequencies in the Containment Leakage Rate Testing Program.

The provisions of Technical Specification 4.0.3 are applicable to the Containment Leakage Rate Testing Program.

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the SITE BOUNDARY radiation doses to within the dose guideline values of 10 CFR Part 100 during accident conditions.

~~Containment leakage rates shall be within the following limits:~~

~~1) An overall integrated leakage rate of less than or equal to L_a, 0.20% by weight of the containment air per 24 hours at P_a, 48.1 psig.~~

~~2) A combined leakage rate of less than 0.60 L_a for all penetrations and valves subject to Type B and C tests, when pressurized to P_a, 48.1 psig.~~

ATTACHMENT 2

TECHNICAL SPECIFICATION CHANGES

(RE-TYPED)

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

a. All penetrations required to be closed during accident conditions are either:

1) Capable of being closed by an OPERABLE containment automatic isolation valve system, or

2) Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Table 3.6-1 of Specification 3.6.3.

b. All equipment hatches are closed and sealed.

c. Each air lock is in compliance with the requirements of Specification 3.6.1.3.

d. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

e. The containment leakage rates are determined per Specification 4.6.1.1.d and are within the limits listed in the Containment Leakage Rate Testing Program of Specification 6.8.4g.

f. Structural integrity is assured via the program described in Specification 6.8.5.c.

CONTROLLED LEAKAGE

1.8 CONTROLLED LEAKAGE shall be that seal water flow from the reactor coolant pump seals.

CORE ALTERATION

1.9 CORE ALTERATION shall be the movement or manipulation of any component within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe conservative position.

CORE OPERATING LIMITS REPORT

1.10 The CORE OPERATING LIMITS REPORT (COLR) is the unit specific document that provides core operating limits for the current operating reload cycle. The cycle specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1.9. Plant operation within these operating limits is addressed in individual specifications.

DOSE EQUIVALENT I-131

1.11 DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microCurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites."

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3, AND 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 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 Primary CONTAINMENT INTEGRITY shall be demonstrated:

a. At least once per 31 days by verifying that all penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Table 3.6-1 of Specification 3.6.3;

b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3;

c. Deleted;

d. By performing containment leakage rate testing in accordance with the Containment Leakage Rate Testing Program of Specification 6.8.4g; and

e. By verifying containment structural integrity in accordance with the Containment Tendon Surveillance Program of Specification 6.8.5.c.

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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.

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with both doors closed except when the air lock is being used for normal transit entry and exists through the containment, then at least one air lock door shall be closed.

APPLICABILITY: MODES 1, 2, 3, AND 4.

ACTION:

a. With one containment air lock door inoperable:

1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed,

2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days,

3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and

4. The provisions of Specification 3.0.4 are not applicable.

b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

a. By verifying leakage rates in accordance with the Containment Leakage Rate Testing Program of Specification 6.8.4g; and

b. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.

PROCEDURES AND PROGRAMS (Continued)

f. Radiological Environmental Monitoring Program (Continued)

3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

g. Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a, is 48.1 psig.

The maximum allowable containment leakage rate, L_a, at P_a, shall be 0.20% of the containment air weight per day.

Leakage rate acceptance criteria are:

a. Containment leakage rate acceptance criterion is $\leq$ 1.0 L_a. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq$ 0.60 L_a for the Type B and C tests and $\leq$ 0.75 L_a for Type A tests;

b. Air lock testing acceptance criteria are:

1) Overall air lock leakage rate is $\leq$ 0.05 L_a when tested at $\geq$ P_a;

2) For each door, leakage rate is $\leq$ 0.005 L_a when pressurized to $\geq$ 10 psig.

The provisions of Technical Specification 4.0.2 do not apply to the test frequencies in the Containment Leakage Rate Testing Program.

The provisions of Technical Specification 4.0.3 are applicable to the Containment Leakage Rate Testing Program.

PROCEDURES AND PROGRAMS (Continued)

6.8.5 The following programs, relocated from the Technical Specifications to FSAR Chapter 16, shall be implemented and maintained:

a. Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the WASTE GAS HOLDUP SYSTEM, the quantity of radioactivity contained in gas storage tanks, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks.

The program shall include:

1. The limits for concentrations of hydrogen and oxygen in the WASTE GAS HOLDUP SYSTEM and a surveillance program to ensure the limits are maintained.

2. A surveillance program to ensure that the quantity of radioactivity contained in each gas storage tank is less than the amount that would result in a whole body exposure of ≥ 0.5 rem to a MEMBER OF THE PUBLIC at the nearest SITE BOUNDARY in the event of an uncontrolled release of the tanks' contents, consistent with Branch Technical Position ETSB 11-5, "Postulated Radioactive Releases due to Waste Gas System Leak or Failure," in NUREG-0800, July 1981.

3. A surveillance program to ensure that the quantity of radioactivity contained in the following outdoor liquid radwaste tanks, that are not surrounded by liners, dikes, or walls capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the liquid radwaste system, is less than the amount that would result in concentrations less than the limits of 10 CFR Part 20.1 - 20.602, Appendix B (redesignated at 56FR23391, May 21, 1991) at the nearest potable water supply and the nearest surface water supply in an UNRESTRICTED AREA, in the event of an uncontrolled release of the tanks' contents:

   a. Reactor Makeup Water Storage Tank,
   b. Refueling Water Storage Tank,
   c. Condensate Storage Tank, and
   d. Outside temporary tanks, excluding demineralizer vessels and the liner being used to solidify radioactive waste.

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the SITE BOUNDARY radiation doses to within the dose guideline values of 10 CFR Part 100 during accident conditions.

ATTACHMENT 3

SAFETY EVALUATION

SAFETY EVALUATION

This license amendment requests a revision to Technical Specification (TS) 3/4.6.1.1, "Containment Integrity," 3/4.6.1.3, "Containment Air Locks" and 6.8, "Procedures and Programs" to implement performance based leakage rate testing as permitted by 10 CFR 50, Appendix J. TS Definition 1.7e would be revised to refer to Specification 6.8.4g and Bases 3/4.6.1.1 would be revised by removal of the containment leakage rate limits. These changes support the implementation of performance based testing allowed by Appendix J, Option B for Type A, B and C containment leak rate testing.

These proposed changes are consistent with the revision to 10 CFR 50, Appendix J as noticed in 60 FR 49495 dated September 26, 1995. A similar request to partially implement Option B for Type B and C testing has been submitted by Georgia Power Company for Vogtle Electric Generating Plant.

Background

The purpose of Appendix J leak test requirements as stated in the introduction to 10 CFR 50, Appendix J is to "assure that (a) leakage through the primary reactor containment and systems and components penetrating primary containment shall not exceed allowable leakage rate values as specified in the technical specifications or associated bases and (b) periodic surveillance of reactor containment penetrations and isolation valves is performed so that proper maintenance and repairs are made during the service life of containment, and systems and components penetrating primary containment."

A revision to 10 CFR 50, Appendix J was issued on September 26, 1995 in Federal Register Volume 60, No. 186. The revision establishes Option B - Performance-Based Requirements, for conducting integrated leak rate tests and local leak rate tests. Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, was issued and endorses, with exceptions, NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," Revision 0.

The NRC Staff issued the revised 10 CFR 50, Appendix J as part of the initiative to eliminate requirements that are marginal to safety. This effort is discussed in SECY-94-036, "Staff Plans for Revising 10 CFR 50, Appendix J,

Containment Leakage Testing, and for Handling Exemption Requests," dated February 17, 1994; and SECY-94-090, "Institutionalization of Continuing Program for Regulatory Improvement," dated March 31, 1994.

Appendix J, as revised by Option B, establishes new performance-based requirements and criteria for periodic leak rate testing. With Option B, the schedule requirements for integrated leak rate tests and local leak rate tests will be based upon the previous test results. NEI 94-01 was developed to provide guidance to implement Option B and the justification for extended test intervals is based on performance history and risk insights. Regulatory Guide 1.163, which endorses NEI 94-01, Revision 0, with exceptions, provides specific guidance on developing a performance-based leakage test program, acceptable leakage rate test methods, procedures, and analyses that may be used to implement the requirements and criteria of Option B. The Callaway Containment Leakage Rate Testing Program would implement performance-based testing as allowed by Option B of 10 CFR 50, Appendix J.

Justification

The proposed changes to TS 1.7e, 4.6.1.1, 3/4.6.1.3, 6.8.4 and Bases 3/4.6.1.1 support the implementation of performance-based leakage rate testing, instead of paraphrasing Appendix J as is done in the present TS. There are no changes to the test type, test methodologies or test acceptance criteria, only the required frequency of tests would be affected. These changes will allow Union Electric to implement the recent revision to 10 CFR 50, Appendix J.

Implementation of the Containment Integrated Leakage Rate Program would allow the integrated leak rate test presently scheduled for Refuel 8 to be rescheduled, since the criteria established by Appendix J, Option B, which requires only one integrated leak rate test in 10 years is presently satisfied by past integrated leak rate test results. Additionally, Type B and C tests presently scheduled for Refuel 8 could also be evaluated for rescheduling, since they may also meet the criteria for test frequency extension. Adoption of the new performance-based leakage rate testing program will result in significant dollar and radiation exposure savings since unnecessary testing can be eliminated.

Additional Information

License Amendment No. 98 and an exemption from the requirements of 10 CFR 50, Appendix J, Section III.D.1.(a) were granted for Callaway Plant on April 5, 1995 and April 4, 1995, respectively. The license amendment and exemption provided relief from the requirements to perform the overall integrated containment leakage rate test at intervals of 40 plus or minus 10 months. The approval of the license amendment and exemption allowed the schedule for the third Type A test to be extended to Refuel 8. However, with the adoption of 10 CFR 50, Appendix J, Option B, the overall integrated containment leakage rate test scheduled for Refuel 8 will be rescheduled, based upon past performance history of Type A tests performed at Callaway Plant, using the criteria provided in NEI 94-01, Revision 0.

Evaluation

The proposed changes to the TS do not involve an unreviewed safety question because operation of Callaway Plant with this change would not:

1. Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report.

   The proposed changes to TS 1.7e, 4.6.1.1, 3/4.6.1.3, Bases 3/4.6.1.1 and the program addition to TS 6.8.4g have no effect on plant operation. The proposed changes only provide mechanisms within TS for implementing a performance-based methodology for determining the frequency of leak rate testing, as allowed by the NRC. The test type, method, and acceptance criteria will not be changed. Containment leakage will continue to be maintained within the required limits. Based on industry and NRC evaluations performed in support of developing Option B, these changes potentially result in a minor increase in the consequences of an accident previously evaluated due to the increased testing intervals. However, the proposed changes do not result in an increase in the core damage frequency since the containment system is used for mitigation purposes only.

   Directly referencing the Containment Leakage Rate Testing Program for Containment ILRT and LLRT requirements does not involve any modification to plant

equipment or affect the operation or design basis of the containment. Leakage rate testing is not a precursor to or an initiating event for any accident.

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

2. Create the possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the Safety Analysis Report.

   The proposed changes only allow for implementation of 10 CFR 50, Appendix J, Option B and do not involve any modifications to any plant equipment or affect the operation or design basis of the containment. The proposed changes do not affect the response of the containment during a design basis accident.

3. Reduce the margin or safety as defined in the basis for any technical specification.

   The proposed changes do not affect or change a safety limit, any limiting condition for operation or affect plant operations. The changes only implement the Appendix J, Option B test frequencies that have been determined by NRC not to involve a safety concern. The testing methods, acceptance criteria and bases are not changed and still provide assurance that the containment will provide its intended function.

Conclusion

Given the above discussions as well as those presented in the Significant Hazards Consideration, the proposed change does not adversely affect or endanger the health or safety of the general public or involve an unreviewed safety question.

ATTACHMENT 4

SIGNIFICANT HAZARDS EVALUATION

SIGNIFICANT HAZARDS EVALUATION

This license amendment requests a revision to Technical Specification (TS) 3/4.6.1.1, "Containment Integrity," 3/4.6.1.3, "Containment Air Locks" and 6.8, "Procedures and Programs" to implement performance based leakage rate testing as permitted by 10 CFR 50, Appendix J. TS Definition 1.7e would be revised to refer to Specification 6.8.4g and Bases 3/4.6.1.1 would be revised by removal of the containment leakage rate limits. These changes support the implementation of performance based testing allowed by Appendix J, Option B for Type A, B and C containment leak rate testing.

These proposed changes are consistent with the revision to 10 CFR 50, Appendix J as noticed in 60 FR 49495 dated September 26, 1995. A similar request to partially implement Option B for Type B and C testing has been submitted by Georgia Power Company for Vogtle Electric Generating Plant.

Background

The purpose of Appendix J leak test requirements as stated in the introduction to 10 CFR 50, Appendix J is to "assure that (a) leakage through the primary reactor containment and systems and components penetrating primary containment shall not exceed allowable leakage rate values as specified in the technical specifications or associated bases and (b) periodic surveillance of reactor containment penetrations and isolation valves is performed so that proper maintenance and repairs are made during the service life of containment, and systems and components penetrating primary containment."

A revision to 10 CFR 50, Appendix J was issued on September 26, 1995 in Federal Register Volume 60, No. 186. The revision establishes Option B - Performance-Based Requirements, for conducting integrated leak rate tests and local leak rate tests. Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, was issued and endorses, with exceptions, NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," Revision 0.

The NRC Staff issued the revised 10CFR 50, Appendix J as part of the initiative to eliminate requirements that are marginal to safety. This effort is discussed in SECY-94-036, "Staff Plans for Revising 10 CFR 50, Appendix J,

Containment Leakage Testing, and for Handling Exemption Requests," dated February 17, 1994; and SECY-94-090, "Institutionalization of Continuing Program for Regulatory Improvement," dated March 31, 1994.

Appendix J, as revised by Option B, establishes new performance-based requirements and criteria for periodic leak rate testing. With Option B, the schedule requirements for integrated leak rate tests and local leak rate tests will be based upon the previous test results. NEI 94-01 was developed to provide guidance to implement Option B and the justification for extended test intervals is based on performance history and risk insights. Regulatory Guide 1.163, which endorses NEI 94-01, Revision 0, with exceptions, provides specific guidance on developing a performance-based leakage test program, acceptable leakage rate test methods, procedures, and analyses that may be used to implement the requirements and criteria of Option B. The Callaway Containment Leakage Rate Testing Program would implement performance-based testing as allowed by Option B of 10 CFR 50, Appendix J.

Justification

The proposed changes to TS 1.7e, 4.6.1.1, 3/4.6.1.3, 6.8.4 and Bases 3/4.6.1.1 support the implementation of performance-based leakage rate testing, instead of paraphrasing Appendix J as is done in the present TS. There are no changes to the test type, test methodologies or test acceptance criteria, only the required frequency of tests would be affected. These changes will allow Union Electric to implement the recent revision to 10 CFR 50, Appendix J.

Implementation of the Containment Integrated Leakage Rate Program would allow the integrated leak rate test presently scheduled for Refuel 8 to be rescheduled, since the criteria established by Appendix J, Option B, which requires only one integrated leak rate test in 10 years is presently satisfied by past integrated leak rate test results. Additionally, Type B and C tests presently scheduled for Refuel 8 could also be evaluated for rescheduling, since they may also meet the criteria for test frequency extension. Adoption of the new performance-based leakage rate testing program will result in significant dollar and radiation exposure savings since unnecessary testing can be eliminated.

Additional Information

License Amendment No. 98 and an exemption from the requirements of 10 CFR 50, Appendix J, Section III.D.1.(a) were granted for Callaway Plant on April 5, 1995 and April 4, 1995, respectively. The license amendment and exemption provided relief from the requirements to perform the overall integrated containment leakage rate test at intervals of 40 plus or minus 10 months. The approval of the license amendment and exemption allowed the schedule for the third Type A test to be extended to Refuel 8. However, with the adoption of 10 CFR 50, Appendix J, Option B, the overall integrated containment leakage rate test scheduled for Refuel 8 will be rescheduled, based upon past performance history of Type A tests performed at Callaway Plant, using the criteria provided in NEI 94-01, Revision 0.

Evaluation

The proposed changes to the TS do not involve a significant hazards consideration because operation of Callaway Plant with this change would not:

1. Involve a significant increase in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report.

   The proposed changes to TS 1.7e, 4.6.1.1, 3/4.6.1.3, Bases 3/4.6.1.1 and the program addition to TS 6.8.4g have no effect on plant operation. The proposed changes only provide mechanisms within TS for implementing a performance-based methodology for determining the frequency of leak rate testing, as allowed by the NRC. The test type, method, and acceptance criteria will not be changed. Containment leakage will continue to be maintained within the required limits. Based on industry and NRC evaluations performed in support of developing Option B, these changes potentially result in a minor increase in the consequences of an accident previously evaluated due to the increased testing intervals. However, the proposed changes do not result in an increase in the core damage frequency since the containment system is used for mitigation purposes only.

   Directly referencing the Containment Leakage Rate Testing Program for Containment ILRT and LLRT requirements does not involve any modification to plant

equipment or affect the operation or design basis of the containment. Leakage rate testing is not a precursor to or an initiating event for any accident.

Therefore, these changes do not 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 previously evaluated in the Safety Analysis Report.

   The proposed changes only allow for implementation of 10 CFR 50, Appendix J, Option B and do not involve any modifications to any plant equipment or affect the operation or design basis of the containment. The proposed changes do not affect the response of the containment during a design basis accident.

3. Involve a significant reduction in a margin of safety.

   The proposed changes do not affect or change a safety limit, any limiting condition for operation or affect plant operations. The changes only implement the Appendix J, Option B test frequencies that have been determined by NRC not to involve a safety concern. The testing methods, acceptance criteria and bases are not changed and still provide assurance that the containment will provide its intended function.

Conclusion

Given the above discussions, the proposed change does not adversely affect or endanger the health or safety of the general public or involve a significant hazards consideration.

ATTACHMENT 5

ENVIRONMENTAL CONSIDERATION

ENVIRONMENTAL CONSIDERATION

This license amendment requests a revision to Technical Specification (TS) 3/4.6.1.1, "Containment Integrity," 3/4.6.1.3, "Containment Air Locks" and 6.8, "Procedures and Programs" to implement performance based leakage rate testing as permitted by 10 CFR 50, Appendix J. TS Definition 1.7e would be revised to refer to Specification 6.8.4g and Bases 3/4.6.1.1 would be revised by removal of the containment leakage rate limits. These changes support the implementation of performance based testing allowed by Appendix J, Option B for Type A, B and C containment leak rate testing.

The proposed amendment involves changes with respect to the use of facility components located within the restricted area, as defined in 10 CFR 20, and changes surveillance requirements. Union Electric has determined that the proposed amendment does not involve:

(1) A significant hazard consideration, as discussed in Attachment 4 of this amendment application;

(2) A significant change in the types or significant increase in the amounts of any effluents that may be released offsite;

(3) A significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or enviromental assessment need be prepared in connection with the issuance of this amendment.