FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

DOCKET NUMBER 50-302/LICENSE NUMBER DPR-72

ATTACHMENT B

LICENSE AMENDMENT REQUEST (LAR) #249, REVISION 1
ONCE THROUGH STEAM GENERATOR TUBE SURVEILLANCE PROGRAM,
ALTERNATE REPAIR CRITERIA (ARC)
FOR AXIAL TUBE END CRACK (TEC) INDICATIONS

PROPOSED IMPROVED TECHNICAL SPECIFICATION
CHANGE PAGES
(STRIKEOUT/SHADED)

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5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

in the specific area of an OTSG are inspected with the inspection result classification and the corresponding action required as specified in Table 5.6.2-3. No credit will be taken for these tubes in meeting minimum sample size requirements. Degraded or defective tubes found in these areas will not be considered in determining the inspection results category as long as the mode of degradation is unique to that area and not random in nature.

e. Inservice tubes with pit-like IGA indications in the first span of the B OTSG, identified in the OTSG Inservice Inspection Surveillance Procedure, must be inspected with bobbin and Motorized Rotating Pancake Coil (MRPC) eddy current techniques from the lower tube sheet secondary face to the bottom of the first tube support plate during each inservice inspection of the B OTSG. No credit is to be taken for this inspection in meeting minimum sample size requirements for the random inspection. Defective tubes found during this inspection are to be plugged or sleeved. Degraded or defective tubes found during this inspection are not to be considered in determining the inspection results category for the random inspection, unless the degradation mechanism identified is a mechanism other than pit-like IGA.

f. Tubes in-service with axially oriented tube end cracks (TEC) are identified in the OTSG Inservice Inspection Surveillance procedure. The portion of the tube with the axial TEC must be inspected using the motorized rotating coil eddy current technique during each subsequent inspection. No credit is to be taken for this inspection for meeting the minimum sample size requirement for random sample inspection.

Tubes identified with TEC that meet the alternate repair criteria will be added to the existing list of tubes in the OTSG Inservice Inspection Surveillance procedure. Tubes identified with TEC during the previous inspection which meet the criteria to remain in-service will not be included when calculating the inspection category of the OTSG.

(continued)

5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

The inspection data for tubes with axially oriented TEC indications shall be compared to the previous inspection data to monitor the indications for growth.

Tubes with axially oriented TEC may be left in-service using the method described in Topical Report BAW-2346P, Revision 0, provided the combined projected leakage from all primary-to-secondary leakage, including axial TEC indications left in-service, does not exceed the Main Steam Line Break (MSLB) accident leakage limit of one gallon per minute, minus 150 gallons per day, per OTSG.

If the plant is required to shut down due to primary-to-secondary leakage and the cause is determined to be degradation of the TEC portion of the tubes, 100% of the tubes with TEC in that OTSG shall be examined in the location of the TEC. If more than 1% of the examined tubes are defective tubes, 100% of the tubes with TEC in the other OTSG shall be examined in the location of the TEC.

Tubes with crack-like indications within the carbon steel portion of the tubesheet shall be repaired or removed from service using the appropriate approved method. Tubes with circumferentially oriented TEC or volumetric indications within the Inconel clad region of the tubesheet shall be repaired or removed from service using the appropriate approved method.

The results of each bobbin coil sample inspection shall be classified into one of the following three categories:

---------- NOTE ----------
In all inspections, previously degraded tubes whose degradation has not been spanned by a sleeve must exhibit significant (>10%) further wall penetrations to be included in the below percentage calculations.

---------- NOTE ----------
For the inspection conducted in accordance with 5.6.2.10.2.f, only tubes with TEC indications identified after the 1997 inspection will be included in the below percentage calculations.

Category	Inspection Results
C-1	Less than 5% of the total tubes inspected are degraded tubes and none of the inspected tubes are defective.
C-2	One or more tubes, but not more than 1% of the total tubes inspected are defective, or between 5% and 10% of the total tubes inspected are degraded tubes.

(continued)

5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

C-3 More than 10% of the total tubes inspected are degraded tubes or more than 1% of the inspected tubes are defective.

3. The above-required inservice inspections of OTSG tubes shall be performed at the following frequencies except, a one-time change for Cycle 11 is granted to modify the scheduled inspection frequency from a calendar-based interval to an interval of 21.6 months of operating time at a temperature of 500°F or above (measured at the hot leg side). This will allow the OTSG tube inspection to coincide with Refuel Outage 11R:

a. Inservice inspections shall be performed at intervals of not less than 12 nor more than 24 calendar months after the previous inspection. If two consecutive inspections following service under all volatile treatment (AVT) conditions, not including the preservice inspection, result in all inspection results falling into the C-1 category, or if two consecutive inspections demonstrate that previously observed degradation has not continued and no additional degradation has occurred, the inspection interval may be extended to a maximum of once per 40 months.

b. If the inservice inspection of an OTSG, conducted in accordance with Table 5.6.2-2 or Table 5.6.2-3 requires a third sample inspection whose results fall in Category C-3, the inspection frequency shall be reduced to at least once per 20 months. The reduction in inspection frequency shall apply until a subsequent inspection demonstrates that a third sample inspection is not required. If the C-3 inspection results classification is due to including new tubes with TEC indications that meet the criteria to remain in-service, no reduction in inspection frequency is required.

c. Additional unscheduled inservice inspections shall be performed on each OTSG in accordance with the first sample inspection specified in Table 5.6.2-2 or Table 5.6.2-3 during the shutdown subsequent to any of the following conditions:

1. Primary-to-secondary tube leaks (not including leaks originating from tube-to-tube sheet welds) in excess of the limits of Specification 3.4.12,

2. A seismic occurrence greater than the Operating Basis Earthquake,

3. A loss-of-coolant accident requiring actuation of the engineered safeguards, or

4. A main steam line or feedwater line break.

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5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

The repair roll in each tube will be inspected during each subsequent inservice inspection while the tube with a repair roll is in service. The repair roll will be considered a specific limited area and will be excluded from the random sampling. No credit will be taken for meeting the minimum sample size.

If primary-to-secondary leakage results in a shutdown of the plant and the cause is determined to be degradation in a repair roll, 100% of the repair rolls in that OTSG shall be examined. If that inspection results in entering Category C-2 or C-3 for specific limited area inspection, as detailed in Table 5.6.2-3, 100% of the repair rolls shall be examined in the other OTSG.

12. Tube End Cracks (TEC) are those crack-like eddy current indications, circumferentially and/or axially oriented, that are within the Inconel clad region of the primary face of the upper and lower tubesheets, but do not extend into the carbon steel-to Inconel clad interface.

b. The OTSG shall be determined OPERABLE after completing the corresponding actions (plug or repair all tubes exceeding the plugging/repair limit) required by Table 5.6.2-2 (and Table 5.6.2-3 if the provisions of Specification 5.6.2.10.2.d are utilized).

There are a number of OTSG tubes that have the potential to exceed the tube plugging/repair limit as a result of tube end anomalies. Defective tubes will be repaired or plugged during the next outage of sufficient duration. An evaluation has been performed which confirms that operability of the CR-3 OTSGs will not be impacted with those tubes in service.

c. Inservice tubes with pit-like IGA indications in the "B" OTSG first span shall be monitored for growth of these indications by using a test probe equivalent to the high frequency bobbin probe used in the 1997 inspection. The indicated percentage throughwall value from the current inspection shall be compared to the indicated percentage throughwall value from the 1997 inspection.

(continued)

5.6 Procedures, Programs and Manuals

5.6.2.11 Secondary Water Chemistry Program

This program provides controls for monitoring secondary water chemistry to inhibit steam generator tube degradation and low pressure turbine disc stress corrosion cracking. 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, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in leakage;

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.

5.6.2.12 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of the Control Room Emergency Ventilation System (CREVS) and the Auxiliary Building Ventilation Exhaust System (ABVES) per the requirements specified in Regulatory Guide 1.52, Revision 2, 1978, and/or as specified herein, and in accordance with ANSI N510-1975 and ASTM D 3803-89 (Re-approved 1995).

a. Demonstrate for each train of the CREVS that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 2, 1978, and in accordance with ANSI N510-1975 at the system flowrate of between 37,800 and 47,850 cfm.

b. Demonstrate for each train of the CREVS that an inplace test of the carbon adsorber shows a system bypass < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1975 at the system flowrate of between 37,800 and 47,850 cfm.

c. Demonstrate for each train of the CREVS that a laboratory test of a sample of the carbon adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, 1978, meets the laboratory testing criteria of ASTM D 3803-89 (Re-approved 1995) at a temperature of 30°C and relative humidity of 95% with methyl iodide penetration of less than 2.5%.

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5.7 Reporting Requirements

5.7.2 Special Reports (continued)

The following Special Reports shall be submitted:

a. When a Special Report is required by Condition B or F of LCO 3.3.17, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

b. Any abnormal degradation of the containment structure detected during the tests required by the Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken.

c. Following each inservice inspection of steam generator (OTSG) tubes, the NRC shall be notified of the following prior to ascension into MODE 4:

1. Number of tubes plugged and repaired;

2. Crack-like indications and assessment of growth for indications in the first span;

3. Results of in-situ pressure testing, if performed; and

4. Number of tubes and axially oriented TEC indications left in-service, the projected accident leakage, and an assessment of growth for TEC indications.

d. Results of OTSG tube inspections that fall into Category C-3 shall be reported to the NRC in accordance with 10CFR50.72.

e. The complete results of the OTSG tube inservice inspection shall be submitted to the NRC within 90 days after breaker closure following restart. The report shall include:

1. Number and extent of tubes inspected,

2. Location and percent of wall-thickness penetration for each indication of an imperfection,

3. Location, bobbin coil amplitude, and axial and circumferential extent (if determined) for each first span IGA indication, and

4. Identification of tubes plugged or repaired and specification of the repair methodology implemented for each tube.

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

DOCKET NUMBER 50-302/LICENSE NUMBER DPR-72

ATTACHMENT C

LICENSE AMENDMENT REQUEST (LAR) #249, REVISION 1
ONCE THROUGH STEAM GENERATOR TUBE SURVEILLANCE PROGRAM, ALTERNATE REPAIR CRITERIA (ARC) FOR AXIAL TUBE END CRACK (TEC) INDICATIONS

PROPOSED IMPROVED TECHNICAL SPECIFICATION CHANGE PAGES (REVISION BARS)

5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

in the specific area of an OTSG are inspected with the inspection result classification and the corresponding action required as specified in Table 5.6.2-3. No credit will be taken for these tubes in meeting minimum sample size requirements. Degraded or defective tubes found in these areas will not be considered in determining the inspection results category as long as the mode of degradation is unique to that area and not random in nature.

e. Inservice tubes with pit-like IGA indications in the first span of the B OTSG, identified in the OTSG Inservice Inspection Surveillance Procedure, must be inspected with bobbin and Motorized Rotating Pancake Coil (MRPC) eddy current techniques from the lower tube sheet secondary face to the bottom of the first tube support plate during each inservice inspection of the B OTSG. No credit is to be taken for this inspection in meeting minimum sample size requirements for the random inspection. Defective tubes found during this inspection are to be plugged or sleeved. Degraded or defective tubes found during this inspection are not to be considered in determining the inspection results category for the random inspection, unless the degradation mechanism identified is a mechanism other than pit-like IGA.

f. Tubes in-service with axially oriented tube end cracks (TEC) are identified in the OTSG Inservice Inspection Surveillance procedure. The portion of the tube with the axial TEC must be inspected using the motorized rotating coil eddy current technique during each subsequent inspection. No credit is to be taken for this inspection for meeting the minimum sample size requirement for random sample inspection.

Tubes identified with TEC that meet the alternate repair criteria will be added to the existing list of tubes in the OTSG Inservice Inspection Surveillance procedure. Tubes identified with TEC during the previous inspection which meet the criteria to remain in-service will not be included when calculating the inspection category of the OTSG.

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5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

The inspection data for tubes with axially oriented TEC indications shall be compared to the previous inspection data to monitor the indications for growth.

Tubes with axially oriented TEC may be left in-service using the method described in Topical Report BAW-2346P, Revision 0, provided the combined projected leakage from all primary-to-secondary leakage, including axial TEC indications left in-service, does not exceed the Main Steam Line Break (MSLB) accident leakage limit of one gallon per minute, minus 150 gallons per day, per OTSG.

If the plant is required to shut down due to primary-to-secondary leakage and the cause is determined to be degradation of the TEC portion of the tubes, 100% of the tubes with TEC in that OTSG shall be examined in the location of the TEC. If more than 1% of the examined tubes are defective tubes, 100% of the tubes with TEC in the other OTSG shall be examined in the location of the TEC.

Tubes with crack-like indications within the carbon steel portion of the tubesheet shall be repaired or removed from service using the appropriate approved method. Tubes with circumferentially oriented TEC or volumetric indications within the Inconel clad region of the tubesheet shall be repaired or removed from service using the appropriate approved method.

The results of each bobbin coil sample inspection shall be classified into one of the following three categories:

---------- NOTE----------
In all inspections, previously degraded tubes whose degradation has not been spanned by a sleeve must exhibit significant (>10%) further wall penetrations to be included in the below percentage calculations.

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For the inspection conducted in accordance with 5.6.2.10.2.f, only tubes with TEC indications identified after the 1997 inspection will be included in the below percentage calculations.

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C-1	Less than 5% of the total tubes inspected are degraded tubes and none of the inspected tubes are defective.
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5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

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5.6 Procedures, Programs and Manuals

5.6.2.10 OTSG Tube Surveillance Program (continued)

The repair roll in each tube will be inspected during each subsequent inservice inspection while the tube with a repair roll is in service. The repair roll will be considered a specific limited area and will be excluded from the random sampling. No credit will be taken for meeting the minimum sample size.

If primary-to-secondary leakage results in a shutdown of the plant and the cause is determined to be degradation in a repair roll, 100% of the repair rolls in that OTSG shall be examined. If that inspection results in entering Category C-2 or C-3 for specific limited area inspection, as detailed in Table 5.6.2-3, 100% of the repair rolls shall be examined in the other OTSG.

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b. The OTSG shall be determined OPERABLE after completing the corresponding actions (plug or repair all tubes exceeding the plugging/repair limit) required by Table 5.6.2-2 (and Table 5.6.2-3 if the provisions of Specification 5.6.2.10.2.d are utilized).

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c. Inservice tubes with pit-like IGA indications in the "B" OTSG first span shall be monitored for growth of these indications by using a test probe equivalent to the high frequency bobbin probe used in the 1997 inspection. The indicated percentage throughwall value from the current inspection shall be compared to the indicated percentage throughwall value from the 1997 inspection.

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5.6 Procedures, Programs and Manuals

5.6.2.11 Secondary Water Chemistry Program

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a. Demonstrate for each train of the CREVS that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 2, 1978, and in accordance with ANSI N510-1975 at the system flowrate of between 37,800 and 47,850 cfm.

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(continued)

5.7 Reporting Requirements

5.7.2 Special Reports (continued)

The following Special Reports shall be submitted:

a. When a Special Report is required by Condition B or F of LCO 3.3.17, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

c. Any abnormal degradation of the containment structure detected during the tests required by the Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken.

c. Following each inservice inspection of steam generator (OTSG) tubes, the NRC shall be notified of the following prior to ascension into MODE 4:

1. Number of tubes plugged and repaired;

2. Crack-like indications and assessment of growth for indications in the first span;

3. Results of in-situ pressure testing, if performed; and

4. Number of tubes and axially oriented TEC indications left in-service, the projected accident leakage, and an assessment of growth for TEC indications.

d. Results of OTSG tube inspections that fall into Category C-3 shall be reported to the NRC in accordance with 10CFR50.72.

e. The complete results of the OTSG tube inservice inspection shall be submitted to the NRC within 90 days after breaker closure following restart. The report shall include:

1. Number and extent of tubes inspected,

2. Location and percent of wall-thickness penetration for each indication of an imperfection,

3. Location, bobbin coil amplitude, and axial and circumferential extent (if determined) for each first span IGA indication, and

4. Identification of tubes plugged or repaired and specification of the repair methodology implemented for each tube.