5.5 Programs and Manuals

5.5.9 Inservice Testing Program (continued)

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;

c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS.

5.5.10 Steam Generator (SG) Tube Surveillance Program

----------NOTE----------
Applicable on each unit after steam generator replacement.

This program provides the controls for SG tube surveillance. The program shall include the following:

a. Examination Methods

Inservice inspection of steam generator tubing shall include non-destructive examination by eddy-current testing or other equivalent techniques. The inspection equipment shall provide a sensitivity that will detect defects with a penetration of 20 percent or more of the minimum allowable as-manufactured tube wall thickness.

5.5 Programs and Manuals

5.5.10 Steam Generator (SG) Tube Surveillance Program (continued)

b. Acceptance Criteria

The steam generator shall be considered operable after completion of the specified actions. All tubes examined exceeding the plugging limit shall be removed from service (e.g., plugged, stabilized).

c. Selection and Testing

The steam generator tube minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 5.5.10-1. The inservice inspection of steam generator tubes shall be performed at the frequencies specified in 5.5.10.d and the inspected tubes shall be verified acceptable per 5.5.10.e. The tubes selected for each inservice inspection shall include at least 3% of the total number of tubes in both steam generators, with one or both steam generators being inspected. The tubes selected for these inspections shall be selected on a random basis except:

1. The first sample inspection during each inservice inspection of each steam generator shall include:

   a. All tubes that previously had detectable wall penetrations (>20%) and have not been plugged.

   b. At least 50% of the tubes inspected shall be in those areas where experience has indicated potential problems.

   c. A tube adjacent to any selected tube which does not permit passage of the eddy-current probe for tube inspection.

2. The tubes selected as the second and third samples (if required by Table 5.5.10-1) during each inservice inspection may be subjected to less than a full tube inspection provided:

   a. The tubes selected for these samples include the tubes from those areas of the tubesheet array where tubes with imperfections were previously found.

   b. The inspections include those portions of the tubes where imperfections were previously found.

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5.5.10 Steam Generator (SG) Tube Surveillance Program (continued)

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

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 no more than 1% of the total tubes inspected are defective, or between 5% and 10% of the total tubes inspected are degraded tubes.
C-3	More than 10% of the total tubes inspected are degraded tubes or more than 1% of the inspected tubes are defective.

NOTE: In all inspections, previously degraded tubes must exhibit significant (>10%) further wall penetrations to be included in the above percentage calculations.

d. Inspection Intervals

The above required inservice inspections of steam generator tubes shall be performed at the following frequencies.

1. Inservice inspections shall be performed at intervals of not less than 12 nor more than 24 calendar months after the previous inspection. If the results of two consecutive inspections fall 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 40 months.

2. If the results of the inservice inspection of a steam generator performed in accordance with Table 5.5.10-1 at 40 month intervals fall in Category C-3, subsequent inservice inspections shall be performed at intervals of not less than 10 months nor more than one fuel cycle after the previous inspection. The increase in inspection frequency shall apply until a subsequent inspection meets the conditions specified in 5.5.10.d.1 and the interval can be extended to a maximum of 40 months.

3. Additional, unscheduled inservice inspections shall be performed on each steam generator in accordance with the first sample inspection specified in Table 5.5.10-1 during the shutdown subsequent to any of the following conditions:

5.5 Programs and Manuals

5.5.10 Steam Generator (SG) Tube Surveillance Program (continued)

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

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

c. A main steam line or feedwater line break.

4. After primary to secondary leakage in excess of the limits of Specification 3.4.13, an inspection of the affected steam generator will be performed in accordance with Table 5.5.10-1 with an initial inspection sample size of 6% of the tubes in the affected steam generator.

e. Definitions

As used in this specification:

1. Imperfection means an exception to the dimensions, finish or contour of a tube from that required by fabrication drawings or specifications. Eddy-current testing indications below 20% of the nominal tube wall thickness, if detectable, may be considered as imperfections.

2. Degradation means a service-induced cracking, wastage, wear or general corrosion occurring on either the inside or outside of a tube.

3. Degraded Tube means a tube containing imperfections ≥ 20% of the nominal wall thickness caused by degradation.

4. % Degradation means the percentage of the tube wall thickness affected or removed by degradation.

5. Defect means an imperfection of such severity that it exceeds the plugging limit. A tube containing a defect is defective.

6. Plugging Limit means the imperfection depth beyond which the tube shall be either removed from service by plugging because it may become unserviceable prior to the next inspection; it is equal to 40% of the nominal tube or sleeve wall thickness.

7. Unserviceable describes the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an Operating Basis Earthquake, a loss-of-coolant accident, or a steam line or feedwater line break as specified in 5.5.10.d.

5.5 Programs and Manuals

5.5.10 Steam Generator (SG) Tube Surveillance Program (continued)

8. Tube Inspection means an inspection of the steam generator tube from the point of entry completely to the point of exit.

TABLE 5.5.10-1 (Page 1 of 2)
STEAM GENERATOR TUBE INSPECTION

1st Sample Inspection			2nd Sample Inspection		3rd Sample Inspection	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S tubes per S.G. (1)	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug defective tubes and inspect additional 2S tubes in this SG.	C-1	None	N/A	N/A
			C-2	Plug defective tubes and inspect additional 4S tubes in this SG.	C-1	None
					C-2	Plug defective tubes.
					C-3	Plug defective tubes and perform action for C-3 result of 1st Sample.
			C-3	Plug defective tubes and perform actions for C-3 results on 1st Sample.	N/A	N/A

(continued)

TABLE 5.5.10-1 (Page 2 of 2)
STEAM GENERATOR TUBE INSPECTION

1st Sample Inspection			2nd Sample Inspection		3rd Sample Inspection	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
(continued)	C-3	Inspect 6S tubes in the S.G, plug defective tubes and inspect 2S tubes in the other S.G. Perform follow-on inspections in the other S.G. in accordance with results of the above inspection as applied to Table 5.5.10-1 Prompt Notification to NRC pursuant to 10 CFR 50.72	C-1	N/A	N/A	N/A
			C-2	N/A	N/A	N/A
			C-3 (2)	(a) If defects can be localized to an affected area, inspect all tubes in affected area and plug defective tubes. (b) If defects cannot be localized to an affected area, inspect all tubes in this S.G. and plug defective tubes.	C-1 C-2 C-3	N/A N/A N/A

Notes: (1) S=3(N/n)% Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection.

(2) Following an 18% random inspection (C-3 category inspection) an unaffected area is identified. The unaffected area will be logically and consistently defined based on generator design, defect location and characteristics. The criteria for accepting an area as unaffected depends on the number of defects found in the sample inspected in that area and are established such that there is a 0.05 or smaller probability of accepting the area as unaffected if it contains 30 or more defective tubes.

5.5 Programs and Manuals (continued)

5.5.11 Secondary Water Chemistry

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

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

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

c. Identification of process sampling points;

d. Procedures for the recording and management of data;

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

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

5.5.12 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2.

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

a. Demonstrate, for the PRVS, that a dioctyl phthalate (DOP) test of the high efficiency particulate air (HEPA) filters shows ≥ 99% removal when tested in accordance with ANSI N510-1975 at the system design flow rate ± 10%.

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

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

5.5 Programs and Manuals

5.5.12 Ventilation Filter Testing Program (VFTP) (continued)

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

e. Demonstrate, for the CRVS Booster Fan Trains, PRVS and SFPVS, that a laboratory test of a sample of the carbon adsorber shows ≥ 90% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 (30°C, 95% RH).

f. Demonstrate, for the PRVS, that the pressure drop across the combined HEPA filters and carbon adsorber banks is < 6 in. of water at the system design flow rate ± 10%.

g. Demonstrate, for the CRVS Booster Fan Trains, that the pressure drop across the pre-filter is ≤ 1 in. of water and the pressure drop across the HEPA filters is ≤ 2 in. of water at the system design flow rate ± 10%.

h. Demonstrate, for the SFPVS, that a dioctyl phthalate (DOP) test of the high efficiency particulate air (HEPA) filters shows ≥ 99% removal when tested in accordance with ANSI N510-1975 at the system design flow rate ± 10%.

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

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.5.13 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the waste gas holdup tanks and the quantity of radioactivity contained in waste gas holdup tanks, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks. The gaseous radioactivity quantities shall be determined. The liquid radwaste quantities shall be determined by analyzing a representative sample of the tank's contents at least once per 7 days when radioactive materials are being added to the tank.

5.5 Programs and Manuals

5.5.13 Explosive Gas and Storage Tank Radioactivity Monitoring Program (continued)

The program shall include:

a. The limit for concentration of hydrogen in the waste gas holdup tanks and a surveillance program to ensure the limit is maintained. The limit shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion);

b. A surveillance program to ensure that the quantity of radioactivity contained in each waste gas holdup tank is less than the amount that would result in a whole body exposure of $\geq$ 0.5 rem to any individual at the nearest exclusion area boundary, in the event of an uncontrolled release of the tank's contents.

c. A surveillance program to ensure that the quantity of radioactivity contained in all 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 Treatment System is less than 10 curies excluding tritium and dissolved or entrained gases.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

5.5.14 Standby Shutdown Facility (SSF) Diesel Fuel Oil Testing Program

A diesel fuel oil testing program to implement required testing of SSF fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the acceptability of Day Tank and Underground Storage Tank fuel oil for use by determining that the fuel oil viscosity, water and sediment are within limits.

5.5.15 Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.

5.5 Programs and Manuals

5.5.15 Technical Specifications (TS) Bases Control Program (continued)

b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:

1. A change in the TS incorporated in the license; or

2. A change to the updated FSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.

c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the UFSAR .

d. Proposed changes that meet the criteria of 5.5.15.b.1 or 5.5.15.b.2 above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

5.5.16 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate limitations and remedial or compensatory actions may be identified to be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;

b. Provisions for ensuring the plant is maintained in a safe condition if a loss of safety function condition exists;

c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and

d. Other appropriate limitations and remedial or compensatory actions.

5.5 Programs and Manuals

5.5.16 Safety Function Determination Program (SFDP) (continued)

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or

b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or

c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

5.5.17 Backup Method for Determining Subcooling Margin

This program ensures the capability to accurately monitor the Reactor Coolant System Subcooling Margin. The program shall include the following:

a. Training of personnel, and

b. Procedures for monitoring.

5.5.18 KHU Commercial Power Generation Testing Program

The KHU Commercial Power Generation Testing Program shall include the following and shall be met during periods of KHU commercial power generation:

a. Verify upon an actual or simulated actuation signal, each KHU's overhead tie breaker and underground tie breaker actuate to the correct position from an initial condition of commercial power generation every 18 months.

b. Verify upon an actual or simulated actuation signal, each KHU's frequency is $\leq$ 66 Hz in $\leq$ 23 seconds from an initial condition of commercial power generation every 18 months.

5.5 Programs and Manuals

5.5.18 KHU Commercial Power Generation Testing Program (continued)

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

5.5.19 Lee Combustion Turbine Testing Program

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

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

b. Verify an LCT can supply equivalent of one Unit's maximum safeguard loads plus two Unit's MODE 3 loads when connected to system grid every 12 months.

c. Verify an LCT can provide equivalent of one Unit's maximum safeguard loads within one hour through 100kV line electrically separated from system grid and offsite loads every 18 months.

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

5.5.20 Battery Discharge Testing Program

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

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

5.5 Programs and Manuals

5.5.20 Battery Discharge Testing Program (continued)

b. If battery capacity is determined to be < 80% of the manufacturer's rating an OPERABILITY evaluation shall be initiated immediately and completed within the guidelines of the Oconee OPERABILITY program. If the OPERABILITY evaluation determines the battery OPERABLE, battery capacity shall be restored to ≥ 80% of the manufacturer's rating within a time frame commensurate with the safety significance of the issue. Otherwise, the battery shall be declared inoperable and the applicable Condition of Specification 3.8.3 shall be entered.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Battery Discharge Testing Program surveillance frequencies.

5.5.21 Steam Generator (SG) Tube Surveillance Program

----------NOTE----------
Applicable on each unit until steam generator replacement.

This program provides the controls for SG tube surveillance. The program shall include the following:

a. Examination Methods

Inservice inspection of steam generator tubing shall include non-destructive examination by eddy-current testing or other equivalent techniques. The inspection equipment shall provide a sensitivity that will detect defects with a penetration of 20 percent or more of the minimum allowable as-manufactured tube wall thickness.

b. Acceptance Criteria

The steam generator shall be considered operable after completion of the specified actions. All tubes examined exceeding the repair limit shall be repaired by sleeving or rerolling or removed from service (e.g., plugged, stabilized).

For Units 1 and 3, there are a number of steam generator tubes which exceed the tube repair limit as a result of tube end anomalies. These tubes are temporarily exempted from the requirements for sleeving, rerolling or removal from service, until repaired during or before the next Unit 1 and Unit 3 refueling outages (Unit 1 EOC 18, Unit 3 EOC 17 refueling outages, respectively). An analysis has been performed which confirms the operability

5.5 Programs and Manuals

5.5.21 Steam Generator (SG) Tube Surveillance Program (continued)

of Units 1 and 3 will not be impacted with these tubes in service until the next refueling outage on each of these units.

c. Selection and Testing

The steam generator tube minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 5.5.21-1. The inservice inspection of steam generator tubes shall be performed at the frequencies specified in 5.5.21.d and the inspected tubes shall be verified acceptable per 5.5.21.e. The tubes selected for each inservice inspection shall include at least 3% of the total number of tubes in both steam generators, with one or both steam generators being inspected. The tubes selected for these inspections shall be selected on a random basis except:

1. The first sample inspection during each inservice inspection of each steam generator shall include:

   a. All tubes that previously had detectable wall penetrations (>20%) and have not been plugged or sleeve repaired in the affected area.

   b. At least 50% of the tubes inspected shall be in those areas where experience has indicated potential problems.

   c. A tube adjacent to any selected tube which does not permit passage of the eddy-current probe for tube inspection.

2. Tubes in the following Group(s) may be excluded from the first sample if all tubes in a Group in both OTSGs are inspected. No credit will be taken for these tubes in meeting minimum sample size requirements.

   Group A-1: Tubes within one, two, or three rows of the open inspection lane.

3. All tubes which have been repaired using the reroll process will have the new roll area inspected during the inservice inspection.

4. The tubes selected as the second and third samples (if required by Table 5.5.21-1) during each inservice inspection may be subjected to less than a full tube inspection provided:

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5.5.21 Steam Generator (SG) Tube Surveillance Program (continued)

a. The tubes selected for these samples include the tubes from those areas of the tubesheet array where tubes with imperfections were previously found.

b. The inspections include those portions of the tubes where imperfections were previously found.

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

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 no more than 1% of the total tubes inspected are defective, or between 5% and 10% of the total tubes inspected are degraded tubes.
C-3	More than 10% of the total tubes inspected are degraded tubes or more than 1% of the inspected tubes are defective.

NOTES:

(1) In all inspections, previously degraded tubes must exhibit significant (>10%) further wall penetrations to be included in the above percentage calculations.

(2) Where special inspections are performed pursuant to 5.5.21.c.2, defective or degraded tubes found as a result of the inspection shall be included in determining the Inspection Results Category for that special inspection but need not be included in determining the Inspection Results Category for the general steam generator inspection, unless the mechanism of degradation is random in nature.

(3) Where special inspections are performed pursuant to 5.5.21.c.2, defective or degraded tube indications found in the new roll area as a result of the inspection and any indications found in the originally rolled region of the rerolled tube, need not be included in determining the Inspection Results Category for the general steam generator inspection.

5.5 Programs and Manuals

5.5.21 Steam Generator (SG) Tube Surveillance Program (continued)

d. Inspection Intervals

The above required inservice inspections of steam generator tubes shall be performed at the following frequencies.

1. Inservice inspections shall be performed at intervals of not less than 12 nor more than 24 calendar months after the previous inspection. If the results of two consecutive inspections following service under all volatile treatment (AVT) conditions fall 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 40 months.

2. If the results of the inservice inspection of a steam generator performed in accordance with Table 5.5.21-1 at 40 month intervals fall in Category C-3, subsequent inservice inspections shall be performed at intervals of not less than 10 months nor more than one fuel cycle after the previous inspection. The increase in inspection frequency shall apply until a subsequent inspection meets the conditions specified in 5.5.21.d.1 and the interval can be extended to a maximum of 40 months.

3. Additional, unscheduled inservice inspections shall be performed on each steam generator in accordance with the first sample inspection specified in Table 5.5.21-1 during the shutdown subsequent to any of the following conditions:

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

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

   c. A main steam line or feedwater line break.

4. After primary to secondary leakage in excess of the limits of Specification 3.4.13, an inspection of the affected steam generator will be performed in accordance with the following criteria:

   a. If the leaking tube is in a Group as defined in Section 5.5.21.c.2, all of the tubes in this Group in this steam generator will be inspected. If the results of this inspection fall into the C-3 category, additional inspections will be performed in the same Group in the other steam generator.

5.5 Programs and Manuals

5.5.21 Steam Generator (SG) Tube Surveillance Program (continued)

b. If the leaking tube has been repaired by the reroll process and is leaking in the new roll area, all tubes in the steam generator that have been repaired by the reroll process will have the new roll area inspected. If the results of this inspection fall into the C-3 category, additional inspections will be performed in the new roll area in the other steam generator.

c. If the leaking tube is not in a Group as defined in 5.5.21.d.4.a, then an inspection will be performed on the affected steam generator in accordance with Table 5.5.21-1 with an initial inspection sample size of 6% of the tubes in the affected steam generator.

e. Definitions

As used in this specification:

1. Imperfection means an exception to the dimensions, finish or contour of a tube from that required by fabrication drawings or specifications. Eddy-current testing indications below 20% of the nominal tube or sleeve wall thickness, if detectable, may be considered as imperfections.

2. Degradation means a service-induced cracking, wastage, wear or general corrosion occurring on either the inside or outside of a tube or a sleeve.

3. Degraded Tube means a tube or a sleeve containing imperfections $\geq$ 20% of the nominal wall thickness caused by degradation.

4. % Degradation means the percentage of the tube or sleeve wall thickness affected or removed by degradation.

5. Defect means an imperfection of such severity that it exceeds the repair limit. A tube or sleeve containing a defect is defective.

6. Repair Limit means the imperfection depth beyond which the tube shall be either removed from service by plugging or repaired by sleeving or rerolling because it may become unserviceable prior to the next inspection; it is equal to 40% of the nominal tube or sleeve wall thickness. Axial tube imperfections of any depth observed between the primary side surface of the tube sheet clad and the end of the tube are excluded from this repair limit.

5.5 Programs and Manuals

5.5.21 Steam Generator (SG) Tube Surveillance Program (continued)

The Babcock and Wilcox process (or method) equivalent to the method described in report, BAW-1823P, Revision 1 will be used for sleeving repairs.

The new roll area must be free of degradation in order for the repair to be considered acceptable. The rerolling process used by Oconee is described in the Topical Report, BAW-2303P, Revision 4.

7. Unserviceable describes the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an Operating Basis Earthquake, a loss-of-coolant accident, or a steam line or feedwater line break as specified in 5.5.21.d.

8. Tube Inspection means an inspection of the steam generator tube from the point of entry completely to the point of exit. The degraded tube above the new roll area can be excluded from future periodic inspection requirements because it is no longer part of the pressure boundary once the repair roll is installed.

TABLE 5.5.21-1 (Page 1 of 2)
STEAM GENERATOR TUBE INSPECTION

1st Sample Inspection			2nd Sample Inspection		3rd Sample Inspection	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S tubes per S.G. (1)	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug or repair defective tubes and inspect additional 2S tubes in this SG.	C-1	None	N/A	N/A
			C-2	Plug or repair defective tubes and inspect additional 4S tubes in this SG.	C-1	None
					C-2	Plug or repair defective tubes.
					C-3	Plug or repair defective tubes and perform action for C-3 result of 1st Sample.
			C-3	Plug or repair defective tubes and perform actions for C-3 results on 1st Sample.	N/A	N/A

(continued)

TABLE 5.5.21-1 (Page 1 of 2)
STEAM GENERATOR TUBE INSPECTION

1st Sample Inspection			2nd Sample Inspection		3rd Sample Inspection	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
(continued)	C-3	Inspect 6S tubes in the S.G, plug or repair Defective tubes and inspect 2S tubes in the other S.G. Perform follow-on inspections in the other S.G. in accordance with results of the above inspection as applied to Table 5.5.21-1 Prompt Notification to NRC pursuant to 10 CFR 50.72	C-1	N/A	N/A	N/A
			C-2	N/A	N/A	N/A
			C-3 (2)	(a) If defects can be localized to an affected area, inspect all tubes in affected area and plug or repair defective tubes. (b) If defects cannot be localized to an affected area, inspect all tubes in this S.G. and plug or repair defective tubes.	C-1 C-2 C-3	N/A N/A N/A

Notes: (1) S=3(N/n)% Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection.

(2) Following an 18% random inspection (C-3 category inspection) an unaffected area is identified. The unaffected area will be logically and consistently defined based on generator design, defect location and characteristics. The criteria for accepting an area as unaffected depends on the number of defects found in the sample inspected in that area and are established such that there is a 0.05 or smaller probability of accepting the area as unaffected if it contains 30 or more defective tubes.

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Occupational Radiation Exposure Report

---NOTE---
A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person - rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescent dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totaling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received from external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 of each year.

5.6.2 Annual Radiological Environmental Operating Report

---NOTE---
A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year.

The report shall include summaries, interpretations, and analyses of trends of the results of the radiological environmental monitoring program for the reporting period. The material provided shall be consistent with the objectives outlined in the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

5.6 Reporting Requirements (continued)

5.6.3 Radioactive Effluent Release Report

---NOTE---
A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR 50.36a and 10 CFR part 50, Appendix I, Section IV.B.1.

5.6.4 Monthly Operating Reports

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report.

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

Core operating limits shall be established, determined and issued in accordance with the following:

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

1. Shutdown Margin limit for Specification 3.1.1;

2. Moderator Temperature Coefficient limit for Specification 3.1.3;

3. Physical Position, Sequence and Overlap limits for Specification 3.2.1 Rod Insertion Limits;

4. AXIAL POWER IMBALANCE operating limits for Specification 3.2.2;

5. QUADRANT POWER TILT (QPT) limits for Specification 3.2.3;

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

6. Nuclear Overpower Flux/Flow/Imbalance and RCS Variable Low Pressure allowable value limits for Specification 3.3.1;

7. RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits for Specification 3.4.1

8. Core Flood Tanks Boron concentration limits for Specification 3.5.1;

9. Borated Water Storage Tank Boron concentration limits for Specification 3.5.4;

10. Spent Fuel Pool Boron concentration limits for Specification 3.7.12;

11. RCS and Transfer Canal boron concentration limits for Specification 3.9.1; and

12. AXIAL POWER IMBALANCE protective limits and RCS Variable Low Pressure protective limits for Specification 2.1.1.

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

(1) DPC-NE-1002-A, Reload Design Methodology II;

(2) NFS-1001-A, Reload Design Methodology;

(3) DPC-NE-2003-P-A, Oconee Nuclear Station Core Thermal Hydraulic Methodology Using VIPRE-01;

(4) DPC-NE-1004-A, Nuclear Design Methodology Using CASMO-3/SIMULATE-3P;

(5) DPC-NE-2008-P-A, Fuel Mechanical Reload Analysis Methodology Using TACO3;

(6) BAW-10192-P-A, BWNT LOCA - BWNT Loss of Coolant Accident Evaluation Model for Once-Through Steam Generator Plants;

5.6 Reporting Requirements (continued)

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

(7) DPC-NE-3000-P-A, Thermal Hydraulic Transient Analysis Methodology;

(8) DPC-NE-2005-P-A, Thermal Hydraulic Statistical Core Design Methodology;

(9) DPC-NE-3005-P-A, UFSAR Chapter 15 Transient Analysis Methodology; and

(10) BAW-10227-P-A, Evaluation of Advanced Cladding and Structural Material (M5) in PWR Reactor Fuel.

The COLR will contain the complete identification for each of the Technical Specifications referenced topical reports used to prepare the COLR (i.e., report number, title, revision number, report date or NRC SER date, and any supplements).

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling System (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 Post Accident Monitoring (PAM) and Main Feeder Bus Monitor Panel (MFPMP) Report

When a report is required by Condition B or G of LCO 3.3.8, "Post Accident Monitoring (PAM) Instrumentation" or Condition D of LCO 3.3.23, "Main Feeder Bus Monitor Panel," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring (PAM only), the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

5.6.7 Tendon Surveillance Report

Any abnormal degradation of the containment structure detected during the tests required by the Pre-stressed Concrete 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.

5.6 Reporting Requirements (continued)

5.6.8 Steam Generator Tube Inspection Report

The steam generator tube inspection report shall comply with the following:

a. The number of tubes plugged or repaired in each steam generator shall be reported to the NRC within 30 days following the completion of the plugging or repair procedure.

b. The results of the steam generator tube inservice inspection shall be reported to the NRC within 3 months following completion of the inspection. This report shall include:

1. Number and extent of tubes inspected.

2. Location and percent of wall-thickness penetration for each indication of a degraded tube.

3. Identification of tubes plugged or repaired.

4. Number of tubes repaired by rerolling and number of indications detected in the new roll area of the repaired tubes.

c. Results of steam generator tube inspections which fall into Category C-3 and require notification to the NRC shall be reported prior to resumption of plant operation. The written report shall provide the results of investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence.

d. The designation of affected and unaffected areas will be reported to the NRC when they are determined.