## **1.1 Definitions**

LEAKAGE (continued)

# MASTER RELAY TEST

MODE

#### **OPERABLE**—OPERABILITY

PHYSICS TESTS

- Reactor Coolant System (RCS) LEAKAGE through a steam generator to the Secondary System (primary to secondary LEAKAGE).
- b. <u>Unidentified LEAKAGE</u>

All LEAKAGE (except RCP seal water injection or leakoff) that is not identified LEAKAGE.

c. Pressure Boundary LEAKAGE

LEAKAGE (except primary to secondary LEAKAGE) through a nonisolable fault in an RCS component body, pipe wall, or vessel wall.

A MASTER RELAY TEST shall consist of energizing all master relays in the channel required for channel OPERABILITY and verifying the OPERABILITY of each required master relay. The MASTER RELAY TEST shall include a continuity check of each associated required slave relay. The MASTER RELAY TEST may be performed by means of any series of sequential, overlapping, or total steps.

A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.

A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).

PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are:

- a. Described in Chapter 14 of the FSAR;
- b. Authorized under the provisions of 10 CFR 50.59; or
- c. Otherwise approved by the Nuclear Regulatory Commission.

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(continued)

# RCS Operational LEAKAGE 3.4.13

# 3.4 REACTOR COOLANT SYSTEM (RCS)

# 3.4.13 RCS Operational LEAKAGE

## LCO 3.4.13

- RCS operational LEAKAGE shall be limited to:
  - a. No pressure boundary LEAKAGE;
  - b. 1 gpm unidentified LEAKAGE;
  - c. 10 gpm identified LEAKAGE; and
  - d. 150 gallons per day primary to secondary LEAKAGE through any one steam generator (SG).

# APPLICABILITY: MODES 1, 2, 3\*, and 4\*.

# ACTIONS

	CONDITION		REQUIRED ACTION	COMPLETION TIME
Α.	RCS operational LEAKAGE not within limits for reasons other than pressure boundary LEAKAGE or primary to secondary LEAKAGE.	A.1	Reduce LEAKAGE to within limits.	4 hours
В.	Required Action and associated Completion Time of Condition A not met. <u>OR</u>	В.1 <u>AND</u>	Be in MODE 3.	6 hours
	Pressure boundary LEAKAGE exists.	B.2	Be in MODE 5.	36 hours
	OR			
	Primary to secondary LEAKAGE not within limit.			

\* For MODES 3 and 4, if steam generator water samples indicate less than the minimum detectable activity of 5.0 E-7 microcuries/ml for principal gamma emitters, the leakage requirement of specification 3.4.13.d. may be considered met.

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RCS Operational LEAKAGE 3.4.13

# SURVEILLANCE REQUIREMENTS

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	SURVEILLANCE	FREQUENCY
SR 3.4.13.1	NOTES	
	<ol> <li>Not required to be performed until 12 hours after establishment of steady state operation.</li> </ol>	
	2. Not applicable to primary to secondary LEAKAGE.	
	Verify RCS operational LEAKAGE is within limits by performance of RCS water inventory balance.	72 hours
SR 3.4.13.2	NOTENOTENOTENOTE	
	Verify primary to secondary LEAKAGE is $\leq$ 150 gallons per day through any one SG.	72 hours

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# 3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.17 Steam Generator (SG) Tube Integrity

LCO 3.4.17 SG tube integrity shall be maintained.

# <u>AND</u>

All SG tubes satisfying the tube repair criteria shall be plugged in accordance with the Steam Generator Program.

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

ACTIONS

	CONDITION		REQUIRED ACTION	COMPLETION TIME
<b>A.</b>	One or more SG tubes satisfying the tube repair criteria and not plugged in accordance with the Steam Generator Program.	A.1	Verify tube integrity of the affected tube(s) is maintained until the next refueling outage or SG tube inspection.	7 days
		AND		
		A.2	Plug the affected tube(s) in accordance with the Steam Generator Program.	Prior to entering MODE 4 following the next refueling outage or SG tube inspection
Β.	Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	6 hours
		AND	•	
		B.2	Be in MODE 5.	36 hours
	OR			
	SG tube integrity not maintained.			

**DIABLO CANYON - UNITS 1 & 2** 

SG Tube Integrity 3.4.17

SURVEILLANCE REQUIREMENTS

	FREQUENCY	
SR 3.4.17.1	Verify SG tube integrity in accordance with the Steam Generator Program.	In accordance with the Steam Generator Program
SR 3.4.17.2	Verify that each inspected SG tube that satisfies the tube repair criteria is plugged in accordance with the Steam Generator Program.	Prior to entering MODE 4 following a SG tube inspection

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#### 5.5 Programs and Manuals (continued)

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# 5.5.9 Steam Generator (SG) Program

1.

A Steam Generator Program shall be established and implemented to ensure that SG tube integrity is maintained. In addition, the Steam Generator Program shall include the following provisions:

## a. Provisions for condition monitoring assessments.

Condition monitoring assessment means an evaluation of the "as found" condition of the tubing with respect to the performance criteria for structural integrity and accident induced leakage. The "as found" condition refers to the condition of the tubing during an SG inspection outage, as determined from the inservice inspection results or by other means, prior to the plugging of tubes. Condition monitoring assessments shall be conducted during each outage during which the SG tubes are inspected or plugged to confirm that the performance criteria are being met.

b. Performance criteria for SG tube integrity.

SG tube integrity shall be maintained by meeting the performance criteria for tube structural integrity, accident induced leakage, and operational LEAKAGE.

Structural integrity performance criterion: All In-service steam generator tubes shall retain structural integrity over the full range of normal operating conditions (including startup, operation in the power range, hot standby, and cool down and all anticipated translents included in the design specification) and design basis accidents. This includes retaining a safety factor of 3.0 against burst under normal steady state full power operation primary-to-secondary pressure differential and, except for flaws addressed through application of the alternate repair criteria discussed in Specification 5.5.9.c.1 and 5.5.9.c.3, a safety factor of 1.4 against burst applied to the design basis accident primary-to-secondary pressure differentials. Apart from the above requirements, additional loading conditions associated with the design basis accidents, or combination of accidents in accordance with the design and licensing basis, shall also be evaluated to determine if the associated loads contribute significantly to burst or collapse. In the assessment of tube integrity, those loads that do significantly affect burst or collapse shall be determined and assessed in combination with the loads due to pressure with a safety factor of 1.2 on the combined primary loads and 1.0 on axial secondary loads.

When alternate repair criteria discussed in Specification 5.5.9.c.1 are applied to axially-oriented outside diameter stress corrosion cracking indications at tube support plate locations, the probability that one or more of these indications in a SG will burst under postulated main steam line break conditions shall be less than 1x10<sup>-2</sup>.

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# 5.5.9 Steam Generator (SG) Program (continued)

When alternate repair criteria discussed in Specification 5.5.9.c.3 are applied to axially-oriented primary water stress corrosion cracking indications at tube support plate locations, the probability that one or more of these indications in a SG will burst under postulated main steam line break conditions shall be less than  $1 \times 10^{-2}$ .

2. Accident induced leakage performance criterion: The primary to secondary accident induced leakage rate for any design basis accident, other than a SG tube rupture, shall not exceed the leakage rate assumed in the accident analysis in terms of total leakage rate for all SGs and leakage rate for an individual SG. Except during a steam generator tube rupture, leakage from all sources, excluding the leakage attributed to the degradation described in Specification 5.5.9.c.1, 5.5.9.c.2, and 5.5.9.c.3, is also not to exceed 1 gallon per minute per SG.

3. The operational LEAKAGE performance criterion is specified in LCO 3.4.13, "RCS Operational LEAKAGE."

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#### 5.5.9 <u>Steam Generator (SG) Program</u> (continued)

c. Provisions for SG tube repair criteria.

Tubes found by inservice inspection to contain flaws with a depth equal to or exceeding 40% of the nominal tube wall thickness shall be plugged.

The following alternate tube repair criteria may be applied as an alternative to the 40% depth based criteria:

1. Tube Support Plate Voltage-Based Repair Criteria

The tube support plate voltage-based repair criteria are used for the disposition of an alloy 600 steam generator tube for continued service that is experiencing predominantly axially oriented outside diameter stress corrosion cracking confined within the thickness of the tube support plates. At tube support plate intersections, the repair criteria is described below:

- a. Steam generator tubes, whose degradation is attributed to outside diameter stress corrosion cracking within the bounds of the tube support plate with bobbin voltages less than or equal to 2.0 volts, will be allowed to remain in service.
- b. Steam generator tubes, whose degradation is attributed to outside diameter stress corrosion cracking within the bounds of the tube support plate with a bobbin voltage greater than 2.0 volts, will be plugged, except as noted in 5.5.9.c.1.c below.
- c. Steam generator tubes, with indication of potential degradation attributed to outside diameter stress corrosion cracking within the bounds of the tube support plate with a bobbin voltage greater than 2.0 volts but less than or equal to the upper voltage repair limit (calculated according to the methodology in Generic Letter 95-05 as supplemented), may remain in service if a rotating pancake coil inspection or comparable inspection technique does not detect degradation. Steam generator tubes, with indications of outside diameter stress corrosion cracking degradation with a bobbin voltage greater than the upper voltage repair limit will be plugged.
- d. Certain intersections as identified in PG&E Letter DCL-03-174, dated December 19, 2003, will be excluded from application of the voltage-based repair criteria as it is determined that these intersections may collapse or deform following a postulated LOCA + SSE event.

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#### 5.5.9 <u>Steam Generator (SG) Program</u> (continued)

- e. A tube which contains a tube support plate intersection with both an axial ODSCC indication and an axial PWSCC indication will be plugged.
- f. If an unscheduled mid-cycle inspection is performed, the following mid-cycle repair limits apply instead of the limits identified in 5.5.9.c.1.a, 5.5.9.c.1.b, and 5.5.9.c.1.c. The mid-cycle repair limits are determined from the following equations:

$$V_{MURL} = \frac{V_{SL}}{1.0 + NDE + Gr \frac{(CL - \Delta t)}{CL}}$$
$$V_{MLRL} = V_{MURL} - (V_{URL} - V_{LRL}) \frac{(CL - \Delta t)}{CL}$$

where:

VURL	= uppei	r voltage	repair limit	
VOIG	appoi	Tonago	Topan mint	

- VLRL = lower voltage repair limit
- VMURL = mld-cycle upper voltage repair limit based on time into cycle
- VMLRL = mid-cycle lower voltage repair limit based on VMURL and time into cycle
- $\Delta t$  = length of time since last scheduled inspection during which V<sub>URL</sub> and V<sub>LRL</sub> were implemented
- CL = cycle length (the time between two scheduled steam generator inspections)
- V<sub>sL</sub> = structural limit voltage
- Gr = average growth rate per cycle length
- NDE = 95% cumulative probability allowance for nondestructive examination uncertainty (i.e., a value of 20% has been approved by the NRC)

Implementation of these mid-cycle repair limits should follow the same approach as in TS 5.5.9.c.1.a, 5.5.9.c.1.b, and 5.5.9.c.1.c.

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DIABLO CANYON - UNITS 1 & 2

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# 5.5.9 <u>Steam Generator (SG) Program</u> (continued)

2. W\* Repair Criteria

The W\* repair criteria are used for disposition of an alloy 600 steam generator tube for continued service that is experiencing predominately axially oriented inside diameter stress corrosion cracking confined within the hot leg tubesheet, below the bottom of the WEXTEX transition (BWT). As used in this specification:

- a. Bottom of WEXTEX Transition (BWT) is the highest point of contact between the tube and tubesheet at, or below the top-of-tubesheet as determined by eddy current testing.
- b. W\* Length is the distance in the hot leg tubesheet below the BWT that precludes tube pull out in the event of the complete circumferential separation of the tube below the W\* length. The W\* length is conservatively set at an undegraded hot leg tube length of 5.2 Inches for Zone A tubes and 7.0 Inches for Zone B tubes. Information provided in WCAP-14797-P, Revision 2, defines the boundaries of Zone A and Zone B.
- c. Flexible W\* Length is the W\* length adjusted for any cracks found within the W\* region. The Flexible W\* Length is the total rotating pancake coil (RPC) inspected length as measured downward from the BWT, and includes NDE uncertainties and crack lengths within W\* as adjusted for growth.
- d. W\* Tube is a tube with degradation within or below the W\* length that is left in service, and degraded within the limits specified in Specification 5.5.9.c.2.e.

(continued)

# 5.5.9 Steam Generator (SG) Program (continued)

- e. Within the hot leg tubesheet, the repair criteria is described below:
  - 1. For tubes to which the W\* criteria are applied, the length of non-degraded tube below BWT shall be greater than or equal to the W\* length plus NDE uncertainties and crack growth for the operating cycle.
  - 2. Axial cracks in tubes returned to service using W\* shall have the upper crack tip below the BWT by at least the NDE measurement uncertainty and crack growth allowance, such that at the end of the subsequent operating cycle the entire crack remains below the BWT.
  - 3. Resolvable, single axial indications (multiple indications must return to the null point between individual cracks) within the flexible W\* length can be left in service. Alternate RPC coils or an ultrasonic test (UT) inspection can be used to demonstrate return to null point between multiple axial indications or the absence of circumferential involvement between axial indications.
  - 4. Tubes with inclined axial indications less than 2.0 inches long (including the crack growth allowance) having inclination angles relative to the tube axis of < 45 degrees minus the NDE uncertainty, ΔNDE<sub>CA</sub>, on the measurement of the crack angle can be left in service. Tubes with two or more parallel (overlapping elevation), inclined axial cracks shall be plugged. For application of the 2.0 inch limit, an inclined indication is an axial crack that is visually inclined on the RCP C-scan, such that an angular measurement is required, and the measured angle exceeds the measurement uncertainty of ΔNDE<sub>CA</sub>.
  - 5. Circumferential, volumetric, and axial indications with inclination angles greater than (45 degrees  $\Delta NDE_{CA}$ ) within the flexible W\* length shall be plugged.
  - 6. Any type or combination of tube degradation below the flexible W\* length is acceptable.

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## DIABLO CANYON - UNITS 1 & 2

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# 5.5.9 <u>Steam Generator (SG) Program</u> (continued)

3. Axial Primary Water Stress Corrosion Cracking (PWSCC) Depth-Based Repair Criteria

The axial PWSCC depth-based repair criteria are used for disposition of axial PWSCC indications, or portions thereof, which are located within the thickness of dented tube support plates which exhibit a maximum depth greater than or equal to 40 percent of the initial tube wall thickness. WCAP-15573, Revision 1, provides repair limits applicable to these intersections.

A tube which contains a tube support plate intersection with both an axial ODSCC Indication and an axial PWSCC indication will be plugged.

d. Provisions for SG tube inspections.

Periodic SG tube inspections shall be performed. The number and portions of the tubes inspected and methods of inspection shall be performed with the objective of detecting flaws of any type (e.g., volumetric flaws, axial and circumferential cracks) that may be present along the length of the tube, from the tube-to-tubesheet weld at the tube inlet to the tube-to-tubesheet weld at the tube inlet to the tube-to-tubesheet weld at the tube outlet, and that may satisfy the applicable tube repair criteria. The tube-to-tubesheet weld is not part of the tube. In addition to meeting the requirements of d.1, d.2, d.3, d.4, d.5, and d.6 below, the inspection scope, inspection methods, and inspection intervals shall be such as to ensure that SG tube integrity is maintained until the next SG inspection. An assessment of degradation shall be performed to determine the type and location of flaws to which the tubes may be susceptible and, based on this assessment, to determine which inspection methods need to be employed and at what locations.

- 1. Inspect 100% of the tubes in each SG during the first refueling outage following SG replacement.
- 2. Inspect 100% of the tubes at sequential periods of 60 effective full power months. The first sequential period shall be considered to begin after the first inservice inspection of the SGs. No SG shall operate for more than 24 effective full power months or one refueling outage (whichever is less) without being inspected.
- 3. If crack indications are found in any SG tube, then the next inspection for each SG for the degradation mechanism that caused the crack indication shall not exceed 24 effective full power months or one refueling outage (whichever is less). If definitive information, such as from examination of a pulled tube, diagnostic non-destructive testing, or engineering evaluation indicates that a crack-like indication is not associated with a crack(s), then the indication need not be treated as a crack.

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DIABLO CANYON - UNITS 1 & 2

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#### 5.5.9 <u>Steam Generator (SG) Program</u> (continued)

4. Indications left in service as a result of application of the tube support plate voltage-based repair criteria in Specification 5.5.9.c.1 shall be inspected by bobbin coil probe every 24 effective full power months or one refueling outage, whichever is less.

Implementation of the steam generator tube support plate voltage-based repair criteria in Specification 5.5.9.c.1 requires a 100% bobbin coil inspection for hot-leg and cold-leg support plate intersections down to the lowest cold-leg tube support plate with known outside diameter stress corrosion cracking (ODSCC) indications. The determination of the lowest cold-leg tube support plate intersection having ODSCC indications shall be based on the performance of at least a 20% random sampling of tubes inspected over their full length.

5. Tubes identified as W\* tubes having a previously identified indication within the flexible W\* length shall be inspected using an RPC probe or equivalent for the full length of the W\* region every 24 effective full power months or one refueling outage, whichever is less.

Implementation of the W\* repair criteria in Specification 5.5.9.c.2 requires a 100 percent RPC probe or equivalent inspection of the hot leg tubesheet Flexible W\* Length, or 8 inches below the hot leg top of tubesheet, whichever is bounding.

6. Inspection of dented tube support plate intersections will be performed in accordance with WCAP-15573, Revision 1, to implement axial PWSCC depth-based repair criteria in Specification 5.5.9.c.3. The extent of required inspection is:

- a. 100 percent bobbin coil inspection of all tube support plate (TSP) intersections.
- b. Plus Point coil inspection of all bobbin coll indications at dented TSP intersections.
- c. Plus Point coil inspection of all prior PWSCC indications left in service.

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**DIABLO CANYON - UNITS 1 & 2** 

5.0-17

# 5.5.9 Steam Generator (SG) Program (continued)

d.

If bobbin coil is relied upon for detection of axial PWSCC in less than or equal to 2 volt dents, then on a SG basis perform Plus Point coil inspection of all TSP intersections having greater than 2 volt dents up to the highest TSP for which PWSCC has been detected in the prior two inspections or current inspection and 20% of greater than 2 volt dents at the next higher TSP. If a circumferential indication is detected in a dent of "x" volts in the prior two inspections or current inspection, Plus Point inspections will be conducted on 100% of dents greater than "x - 0.3" volts up to the affected TSP elevation in the affected SG, plus 20% of dents greater than "x - 0.3" volts at the next higher TSP. "x" is defined as the lowest dent voltage where a circumferential crack was detected.

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If bobbin coil is not relied upon for detection of axial PWSCC in less than or equal to 2 volt dents, then on a SG basis perform Plus Point coil inspection of all dented TSP intersections (no lower dent voltage threshold) up to the highest TSP for which PWSCC has been detected in the prior two inspections or current inspection and 20% of all dents at the next higher TSP.

f.

For any 20% dent sample, a minimum of 50 dents at the TSP elevation shall be inspected. If the population of dents is less than 50 at the TSP elevation, then 100% of the dents at the TSP elevation shall be inspected.

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Provisions for monitoring operational primary to secondary LEAKAGE.

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## 5.6 Reporting Requirements (continued)

## 5.6.10 Steam Generator (SG) Tube Inspection Report

- a. A report shall be submitted within 180 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with the Specification 5.5.9, Steam Generator (SG) Program. The report shall include:
  - 1. The scope of inspections performed on each SG,
  - 2. Active degradation mechanisms found,
  - 3. Nondestructive examination techniques utilized for each degradation mechanism,
  - 4. Location, orientation (if linear), and measured sizes (if available) of service induced indications,
  - 5. Number of tubes plugged during the inspection outage for each active degradation mechanism,
  - 6. Total number and percentage of tubes plugged to date, and
  - 7. The results of condition monitoring, including the results of tube pulls and insltu testing.

b. For implementation of the tube support plate voltage-based repair criteria in Specification 5.5.9.c.1, notify the NRC prior to the initial entry into MODE 4 should any of the following arise:

1. If ODSCC indications are identified that extend beyond the confines of the tube support plate.

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# 5.6 Reporting Requirements

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# 5.6.10 Steam Generator (SG) Tube Inspection Report (continued)

- c. The results of the inspection of W\* tubes shall be submitted within 90 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with Specification 5.5.9, Steam Generator (SG) Program. This report shall include:
  - 1. Identification of W\* tube indications and indications that do not meet W\* requirements and were plugged, including the following information: the number of indications, the locations of the indications (relative to the BWT and TTS), the orientation (axial, circumferential, volumetric, inclined), the radial position of the tube within the tubesheet, the W\* Zone of the tube, the severity of each indication (estimated depth), the side of the tube in which the indication initiated (Inside or outside diameter), the W\* inspection distance measured with respect to the BWT or TTS (whichever is lower), the length of axial indications, the angle of inclination of clearly skewed axial cracks (if applicable), verification that the upper crack tip of W\* indications returned to service in the prior cycle remain below the BWT by at least the 95% confidence NDE uncertainty on locating the crack tip relative to the BWT, updated 95% growth rate for use in operational assessment, the cumulative number of indications detected in the tubesheet region as a function of elevation within the tubesheet, and the condition monitoring and operational assessment main steamline break leak rate for each indication and each SG in accordance with the leak rate methodology described in PG&E Letter DCL-05-018, dated March 11, 2005, as supplemented by PG&E Letter DCL-05-090, dated August 25, 2005.
  - 2. Assessment of whether the results were consistent with expectations and, if not consistent, a description of the proposed corrective action.
- d. The aggregate calculated steam line break leakage from application of all alternate repair criteria and non-alternate repair criteria shall be submitted within 90 days after the initial entry into MODE 4 following completion of an Inspection performed in accordance with Specification 5.5.9, Steam Generator (SG) Program.
- e. For implementation of tube support plate voltage-based repair criteria in Specification 5.5.9.c.1, a report shall be submitted within 90 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with the Specification 5.5.9, Steam Generator (SG) Program. The report shall include the information described in Section 6b of Attachment 1 of NRC Generic Letter 95-05.

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#### 5.6 Reporting Requirements

# 5.6.10 Steam Generator (SG) Tube Inspection Report (continued)

- f. For implementation of the repair criteria for axial PWSCC at dented TSPs, the results of the condition monitoring and operational assessments will be submitted within 120 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with Specification 5.5.9, Steam Generator (SG) Program. The report will include:
  - 1. Tabulations of indications found in the inspection, tubes plugged, and tubes left in service under the ARC.
  - 2. Growth rate distributions for indications found in the inspection and growth rate distributions used to establish the tube repair limits.
  - 3. Plus Point confirmation rates for bobbin detected indications when bobbin is relied upon for detection of axial PWSCC in less than or equal to 2 volt dents.
  - 4. For condition monitoring, an evaluation of any indications that satisfy burst margin requirements based on the Westinghouse burst pressure model, but do not satisfy burst margin requirements based on the combined ANL ligament tearing and throughwall burst pressure model.

(continued)

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## 5.6 Reporting Requirements

# 5.6.10 Steam Generator (SG) Tube Inspection Report (continued)

- 5. Performance evaluation of the operational assessment methodology for predicting flaw distributions as a function of flaw size.
- 6. Evaluation results of number and size of previously reported versus new PWSCC indications found in the inspection, and the potential need to account for new indications in the operational assessment burst evaluation.
- 7. Identification of mixed mode (axial PWSCC and circumferential) indications found in the inspection and an evaluation of the mixed mode indications for potential impact on the axial indication burst pressures or leakage.
- 8. Any corrective actions found necessary in the event that condition monitoring requirements are not met.
- g. For implementation of the probability of prior cycle detection (POPCD) method, for the voltage-based repair criteria at tube support plate intersections, if the end-of-cycle conditional main steamline break burst probability, the projected main steamline break leak rate, or the number of indications are underpredicted by the previous cycle operational assessment, the following shall be submitted within 90 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with Specification 5.5.9, Steam Generator (SG) Program:
  - 1. The assessment of the probable causes for the underpredications, proposed corrective actions, and any recommended changes to probability of detection or growth methodology indicated by potential methods assessments.
  - 2. An assessment of the potential need to revise the alternate repair criteria analysis methods if: the burst probability is underpredicted by more than 0.001 (i.e., 10% of the reporting threshold) or an order of magnitude; or the leak rate is underpredicted by more than 0.5 gpm or an order of magnitude.
  - 3. An assessment of the potential need to increase the number of predicted low voltage indications at the beginning of cycle if the total number of as-found indications in any SG are underestimated by greater than 15% or by greater than 150 indications.

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