INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The incore detection system shall be OPERABLE with:

a. At least 75% of all incore detector locations, and

b. A minimum of two quadrant symmetric incore detector locations per core quadrant.

An OPERABLE incore detector location shall consist of a fuel assembly containing a fixed detector string with a minimum of three OPERABLE rhodium detectors.

APPLICABILITY: When the incore detection system is used for:

a. Recalibration of the excore axial flux offset detection system,

b. Monitoring the AZIMUTHAL POWER TILT,

c. Calibration of the power level neutron flux channels, or

d. Monitoring the linear heat rate.

ACTION:

With the incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The incore detection system shall be demonstrated OPERABLE:

a. By performance of a CHANNEL CHECK within ~~24 hours~~ 7 days prior to its use ~~and at least once per 7 days thereafter~~ when required for:

1. Recalibration of the excore axial flux offset detection system,

2. Monitoring the linear heat rate pursuant to Specification 4.2.1.3,

SURVEILLANCE REQUIREMENTS (Continued)

b. Monitoring the containment sump inventory and discharge at least once per 12 hours,

c. Performance of a Reactor Coolant System water inventory balance at least once per 72 hours during steady state operation except when operating in the shutdown cooling mode,

d. Monitoring the reactor head flange leakoff system at least once per 24 hours, and

e. Verifying each Reactor Coolant System Pressure Isolation Valve leakage (Table 3.4.6-1) to be within limits:

1. Prior to entering MODE 2 after refueling,

2. Prior to entering MODE 2, whenever the plant has been in COLD SHUTDOWN for ~~72 hours~~ 7 days or more and if leakage testing has not been performed in the previous 9 months,

3. Prior to returning the valve to service following maintenance, repair or replacement work on the valve.

4. The provision of Specification 4.0.4 is not applicable for entry into MODE 3 or 4.

f. Whenever integrity of a pressure isolation valve listed in Table 3.4.6-1 cannot be demonstrated the integrity of the remaining check valve in each high pressure line having a leaking valve shall be determined and recorded daily. In addition, the position of one other valve located in each high pressure line having a leaking valve shall be recorded daily.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days and within 6 hours after each solution volume increase of ≥ 1% of tank volume by verifying the boron concentration of the safety injection tank solution.

c. At least once per 31 days when the RCS pressure is above 1750 psia, by verifying that power to the isolation valve operator is removed by maintaining the breaker open under administrative control.

d. At least once per 18 months by verifying that each safety injection tank isolation valve opens automatically under each of the following conditions make it:

1. When the RCS pressure exceeds 350 psia, and

2. Upon receipt of a safety injection test signal.

ADD

This surveillance is not required when the volume increase makeup source is the RWT and the RWT has not been diluted since verifying that the RWT boron concentration is equal to or greater than the ~~Accumulator~~ Safety Injection Tank boron concentration limit.

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

Valve Number	Valve Function	Valve Position
1. V-3659	1. Mini-flow isolation	1. Open
2. V-3660	2. Mini-flow isolation	2. Open

b. At least once per 31 days by:

1. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

At least once daily

2. ~~a~~ of the areas affected within containment ~~at the completion of containment entry~~ when CONTAINMENT INTEGRITY is established.

d. At least once per 18 months by:

1. Verifying proper operation of the open permissive interlock (OPI) and the valve open/high SDCS pressure alarms for isolation valves V3651, V3652, V3480, V3481.

2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.

by the containment entry and during the final entry

INSTRUMENTATION

INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The incore detection system shall be OPERABLE with:

a. At least 75% of all incore detector locations, and

b. A minimum of two quadrant symmetric incore detector locations per core quadrant.

An OPERABLE incore detector location shall consist of a fuel assembly containing a fixed detector string with a minimum of three OPERABLE rhodium detectors or an OPERABLE movable incore detector capable of mapping the location.

APPLICABILITY: When the incore detection system is used for:

a. Recalibration of the excore axial flux offset detection system,

b. Monitoring the AZIMUTHAL POWER TILT,

c. Calibration of the power level neutron flux channels, or

d. Monitoring the linear heat rate.

ACTION:

a. With the incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The incore detection system shall be demonstrated OPERABLE:

a. By performance of a CHANNEL CHECK within ~~24 hours~~ 7 days prior to its use ~~and at least once per 7 days thereafter~~ when required for:

1. Recalibration of the excore axial flux offset detection system,

2. Monitoring the linear heat rate pursuant to Specification 4.2.1.3,

SURVEILLANCE REQUIREMENTS (Continued)

c. Performance of a Reactor Coolant System water inventory balance at least once per 72 hours.

d. Monitoring the reactor head flange leakoff system at least once per 24 hours.

4.4.6.2.2 Each Reactor Coolant System Pressure Isolation Valve check valve specified in Table 3.4-1 shall be demonstrated OPERABLE by verifying leakage to be within its limit:

a. At least once per 18 months,

b. Prior to entering MODE 2 whenever the plant has been in COLD SHUTDOWN for ~~72 hours~~ 7 days or more and if leakage testing has not been performed in the previous 9 months,

c. Prior to returning the valve to service following maintenance, repair or replacement work on the valve,

d. Following valve actuation due to automatic or manual action or flow through the valve:

1. Within 24 hours by verifying valve closure, and

2. Within 31 days by verifying leakage rate.

4.4.6.2.3 Each Reactor Coolant System Pressure Isolation Valve motor-operated valve specified in Table 3.4-1 shall be demonstrated OPERABLE by verifying leakage to be within its limit;

a. At least once per 18 months, and

b. Prior to returning the valve to service following maintenance, repair, or replacement work on the valve.

The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or 4.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 1% of tank volume by verifying the boron concentration of the safety injection tank solution.

c. At least once per 31 days when the RCS pressure is above 700 psia, by verifying that power to the isolation valve operator is disconnected by maintaining the breaker open by administrative controls.

d. At least once per 18 months by verifying that each safety injection tank isolation valve opens automatically under each of the following conditions:

1. When an actual or simulated RCS pressure signal exceeds 515 psia, and

2. Upon receipt of a safety injection test signal.

4.5.1.2 Each safety injection tank water level and pressure channel shall be demonstrated OPERABLE:

a. At least once per 31 days by the performance of a CHANNEL FUNCTIONAL TEST.

b. At least once per 18 months by the performance of a CHANNEL CALIBRATION.

Add

This surveillance is NOT Required when the volume increase make up source is the RWT and the RWT has NOT been diluted since verifying that the RWT boron concentration is equal to or greater than the Safety injection tank boron concentration Limit.

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

Valve Number	Valve Function	Valve Position
a. V3733 V3734	a. SIT Vent Valves	a. Locked Closed
b. V3735 V3736	b. SIT Vent Valves	b. Locked Closed
c. V3737 V3738 V3739 V3740	c. SIT Vent Valves	c. Locked Closed

b. At least once per 31 days by verifying that each valve (manual, power-operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

c. By verifying that the ECCS piping is full of water by venting the accessible piping high points following maintenance, shutdown cooling system operation and/or any other activity which could cause the introduction of air into the system.

d. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

2. At least once daily of the areas affected within containment ~~at the completion of containment entry~~ when CONTAINMENT INTEGRITY is established.

e. At least once per 18 months by:

1. Verifying automatic isolation and interlock action of the shutdown cooling system from the Reactor Coolant System when RCS pressure (actual or simulated) is greater than or equal to 515 psia, and that the interlocks prevent opening the shutdown cooling system isolation valves when RCS pressure (actual or simulated) is greater than or equal to 276 psia.

by the containment entry and during the final entry.

St. Lucie Units 1 and 2
Docket No. 50-335 and 50-389
Proposed License Amendments
NRC Generic Letter 93-05
Line-Item Technical Specification Improvements

ATTACHMENT 2

SAFETY ANALYSIS

Introduction

The staff of the Nuclear Regulatory Commission (NRC) has completed a comprehensive examination of surveillance requirements in technical specifications that require testing during power operation. This effort was part of the technical specification improvement program (TSIP). The results of this work were presented in NUREG 1366, "Improvements to Technical specifications Surveillance Requirements," dated December 1992. NUREG 1366 provided recommendations based on NRC findings. Generic Letter 93-05 was subsequently issued to provide guidance to licensees who plan to adopt applicable recommendations (line-item improvements).

Changes are proposed to revise the St. Lucie Unit 1 (Unit 2) Technical Specifications Sections 4.3.3.2.a (4.3.3.2.a), 4.4.6.2.e.2 (4.4.6.2.2.b), 4.5.1.b (4.5.1.1.b), and 4.5.2.c.2 (4.5.2.d.2) to reduce the frequency of testing at power consistent with the recommendations of Generic letter 93-05 and NUREG 1366 Items 5.8, 6.1, 7.1, and 7.5.

The title and number of the following proposed line-item improvements correspond to the section title and number in NUREG 1366 and GL 93-05. The proposed changes are compatible with plant operating experience and are consistent with the guidance provided by the NRC.

Discussion

The proposed changes to the St. Lucie Unit 1 and Unit 2 Technical Specifications revise the following requirements:

1. G 93-05 Section 5.8 - Incore Detector Surveillance

GL 93-05 Recommendation: The B&W surveillance for incore detectors should be used for CE plants.

Unit 1 and Unit 2 surveillance requirement 4.3.3.2.a. - The current Incore Detector surveillance requires a channel check within 24 hours of use and once per 7 days thereafter. The recommended change uses the wording from the B&W standard technical specifications which require the channel check to be performed only within 7 days prior

to use. These changes do not change any operability requirements for incore detectors, just the surveillance requirements.

2. GL 93-05 Section 6.1 - Reactor coolant system Isolation Valves

GL 93-05 Recommendation: Increase the 72-hour time for remaining in cold shutdown without leak testing the reactor coolant system (RCS) isolation valves to 7 days.

Unit 1 surveillance requirement 4.4.6.2.e.2. and Unit 2 surveillance requirement 4.4.6.2.2.b. - The current reactor coolant system (RCS) pressure isolation valve surveillance requires a leaktest of RCS pressure isolation valves if the unit is shutdown more than 72 hours if the valves have not been tested within the last 9 months. The recommended change requires the RCS pressure isolation valve leaktest surveillance only if the unit is in cold shutdown 7 days or more and if leakage testing has not been performed in the previous 9 months. As described in NUREG 1366, the NRC staff recommended that the 72-hour time for remaining shutdown without testing the RCS pressure isolation valves for leaks be increased to 7 days to help utilities perform short notice outage repairs under less stress, without a significant difference in the associated risk.

3. GL 93-05 Section 7.1 - Surveillance of Boron Concentration in the Safety Injection Tank

GL 93-05 Recommendation: It should not be necessary to verify boron concentration of Safety Injection Tank inventory after a volume increase of 1 % or more if the makeup water is from the refueling water tank (RWT) and the minimum concentration of boron in the RWT is greater than or equal to the minimum boron concentration in the Safety Injection Tank, the recent RWT sample was within specifications, and the RWT has not been diluted.

Unit 1 Surveillance Requirement 4.5.1.b. and Unit 2 Surveillance Requirement 4.5.1.1.b - The current Safety Injection Tank (SIT) surveillance requires verification of boron concentration once per 31 days and within 6 hours after each solution volume change of greater than 1 % of the tank volume. The recommended change eliminates the requirement to verify boron concentration within 6 hours after each solution volume change of 1 % if the makeup water source is from a refueling water tank (RWT) that had its latest test in specification and the RWT minimum concentration is equal to or greater than the minimum SIT boron concentration. For St. Lucie Unit 1 and Unit 2, the RWT and SIT technical specification minimum boron concentrations are the same, 1720 ppm.

4. GL 93-05 Section 7.5 - Visual Inspection of the Containment Sump

GL 93-05 Recommendation: Inspection of the containment at least once daily if the containment has been entered that day, and during the final entry to ensure that there is no loose debris that would clog the sump.

Unit 1 surveillance requirement 4.5.2.c.2 and Unit 2 surveillance requirement 4.5.2.d.2 - The current containment surveillance requires a visual inspection of the containment sump at the completion of each containment entry. The recommended change to the surveillance requires a sump inspection only once daily or at the end of containment entries for multiple entries in one day.

St. Lucie Units 1 and 2
Docket No. 50-335 and 50-389
Proposed License Amendments
NRC Generic Letter 93-05
Line-Item Technical Specification Improvements

ATTACHMENT 3

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

The standards used to arrive at a determination that a request for amendment involves a no significant hazards consideration are included in the Commission's regulation, 10 CFR 50.92. 10 CFR 50.92 states that no significant hazards considerations are involved if the operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed as follows:

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

The proposed amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated because the proposed amendments conform to the guidance given in Enclosure 1 of the NRC Generic Letter 93-05. The overall functional capabilities of the incore detector system, reactor coolant system pressure isolation valves, safety injection tank, or containment sump will not be modified by the proposed change. Therefore, the probability or consequences of an accident are not significantly increased by the changes.

(2) Use of the modified specification would not create the possibility of a new or different kind of accident from any previously evaluated.

The use of the modified specifications can not create the possibility of a new or different kind of accident from any previously evaluated since the proposed amendments will not change the physical plant or the modes of plant operation defined in the facility operating license. No new failure mode is introduced due to the surveillance interval changes and clarifications, since the proposed changes do not involve the addition or modification of equipment nor do they alter the design or operation of affected plant systems.

(3) Use of the modified specification would not involve a significant reduction in a margin of safety.

The operating limits and functional capabilities of the affected systems are unchanged by the proposed amendments. Therefore, the modified specifications which establish new or clarify old surveillance intervals consistent with the NRC Generic Letter 93-05 line-item improvement guidance do not significantly reduce any of the margins of safety.

Based on the above, we have determined that the proposed amendments do not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the probability of a new or different kind of accident from any previously evaluated, or (3) involve a significant reduction in a margin of safety; and therefore do not involve a significant hazards consideration.