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LCR S06-03

PSEG
Nuclear LLC

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS ACCIDENT MONITORING INSTRUMENTATION AND SOURCE CHECK DEFINITION
SALEM GENERATING STATION – UNIT 1 AND UNIT 2
DOCKET NOS. 50-272 AND 50-311
FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR-75

In accordance with the provisions of 10 CFR 50.90, PSEG Nuclear, LLC (PSEG) hereby transmits a request for amendment of the Technical Specifications (TS) for Salem Generating Station Unit 1 and Unit 2. In accordance with 10 CFR 50.91(b)(1), a copy of the transmittal has been sent to the State of New Jersey.

The proposed amendment moves the Main Steamline Discharge (Safety Valves and Atmospheric Dumps) Radiation Monitors (R46) from the radiation monitoring instrumentation technical specification (3.3.3.1) to the accident monitoring technical specification (3.3.3.7). The purpose of the R46 monitors is to provide continuous monitoring of high-level, post-accident releases of radioactive noble gases; therefore relocation to TS 3.3.3.7 is appropriate. This change is similar to PSEG proposed license change LCR S05-06, for the R44 monitors, submitted on August 31, 2005, and supplemented December 8, 2005 and is requested as a result of upgrading the existing monitors to a newer style monitor of increased reliability.

In addition to the above proposed change, TS definition 1.31, SOURCE CHECKS, will be modified to allow different methods to comply with the SOURCE CHECK requirement. This change will affect the remaining instruments in TS 3.3.3.1, and will allow for appropriate testing consistent with the technology of the existing detectors, and replacement detectors in the future.

Attachment 1 provides a description of the proposed changes. Attachment 2 provides the existing TS pages marked up to show the proposed changes. For information, Attachment 3 provides the existing TS Bases pages marked-up to reflect the associated changes to the TS Bases.

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PSEG requests the license amendment by September 15, 2006 to support refueling outage 2R15, with a 30-day implementation period after amendment approval.

Should you have any questions regarding this request, please contact Mr. Justin Wearne at (856) 339-5081.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 5/1/06
(Date)

Sincerely,

Thomas P. Joyce
Site Vice President
Salem Generating Station

Attachments (3)

C: Mr. S. Collins, Administrator – Region I
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REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS ACCIDENT MONITORING INSTRUMENTATION AND SOURCE CHECK DEFINITION

Table of Contents

CHANGES TO TECHNICAL SPECIFICATIONS

1. DESCRIPTION

The purpose of this amendment is to revise Limiting Condition for Operation 3.3.3.1 and 3.3.3.7 by moving the requirement for the Main Steamline Discharge (Safety Valves and Atmospheric Dumps) radiation monitors (R46) from the radiation monitoring specification (3.3.3.1) to the accident monitoring specification (3.3.3.7).

The definition of SOURCE CHECK in the Definitions Section of Technical Specifications (Section 1) is revised to allow for alternative methodologies to meet the source check requirement.

2. PROPOSED CHANGE

TS 3.3.3.1 to TS 3.3.3.7 Relocation

Salem Technical Specifications (TS) require 4 (one per Main Steamline) Main Steamline Discharge (Safety Valves and Atmospheric Dumps) radiation monitors (R46). The R46 monitors provide continuous monitoring of high-level, post-accident releases of radioactive noble gases via the safety-relief valves, atmospheric dump valves, and auxiliary feedpump turbine, and are capable of functioning both during and following accident conditions. The requested change moves the R46 monitors from the radiation monitor specification (3.3.3.1) to the accident monitoring specification (3.3.3.7). There will be no change in the required number of channels or actions for inoperability. There are two changes as the result of this administrative move in TS. The first change is that R46 monitors will be required in modes 1-3 as opposed to the currently specified modes 1-4. The other change is the elimination of a monthly surveillance requirement of a SOURCE CHECK; TS 3.3.3.7 does not require this check.

SOURCE CHECK Definition Change

TS definition 1.31, SOURCE CHECK, is revised to allow for different methods to comply with the source check requirement. The current definition requires exposing the detectors to a source of increased radioactivity. The revised definition will allow for equivalent electronic methods, recognizing the technology of improved detector designs. The change will also eliminate unnecessary dose exposure.

3. BACKGROUND

TS 3.3.3.1 to TS 3.3.3.7 Relocation

The existing off-line Main Steam Line Radiation Monitors (R46) will be replaced with new adjacent-to-line ion chambers. This change will first be done on Unit 2 during the 2006 fall outage. The existing monitors use off-line samplers through which a steam sample is passed and viewed by a Geiger-Mueller (GM) tube detector. The existing detectors are fitted with a Cs-137 check source which, when activated, positions the source within view of the detector and causes an upscale deflection.

The new ion chambers will be mounted in the Mechanical Penetration areas adjacent to the main steam lines. By design specification, the new monitors do not include a source check mechanism. Instead, the new ion chambers will contain, internal to the detector geometry, a long-lived source of radioactivity that will continuously cause ionizations within the chamber, producing a continuous upscale reading. Downscale alarms annunciate a potential detector failure. Additionally, the electronics includes the capability for injecting a test signal into the detector electronics for an upscale indication. The electronics operate using a fail-safe methodology. Should the detector or electronics malfunction, a downscale fail condition is annunciated via a FAIL alarm indication and relay contact. This design ensures that the ion chambers are intact, filled with gas, biased with high voltage, and are continuously responding to ionization events. The electronics test ensures continuity of the electronics. This meets the intent of the original SOURCE CHECK requirement, but not to the exact letter of the definition. In addition, Westinghouse Standard Technical Specifications (STS), NUREG 1431, do not contain a definition for SOURCE CHECK. The STS requires a monthly CHANNEL CHECK and no source check on radiation detectors in the post accident monitoring specification. The proposed change will maintain the present CHANNEL CHECK performed every shift.

SOURCE CHECK Definition Change

TS definition 1.31, SOURCE CHECK currently requires exposing the detectors to a source of increased radioactivity to obtain a qualitative assessment of channel response. Past generation monitor design utilized this methodology; however current monitor design does not rely on, or provide means to perform an external source check. The qualitative assessment of channel response is achieved by other means (internal sources for continuous upscale readings, and electronic qualitative assessments). The proposed revised definition will allow for equivalent qualitative assessment methods, recognizing the technology of improved designs. The change will also eliminate unnecessary dose or radiation exposure.

4. TECHNICAL ANALYSIS

TS 3.3.3.1 to TS 3.3.3.7 Relocation

Relocating the R46 monitors to TS 3.3.3.7 will eliminate the requirement for a SOURCE CHECK. As discussed above, by design the new monitors do not include a source check mechanism. Instead, the new ion chambers will contain, internal to the detector geometry, a long-lived source of radioactivity that will continuously cause ionizations within the chamber, producing a continuous upscale reading. The electronics operate using a fail-safe methodology and a failure mode and effects analysis (FMEA) has been performed in accordance with ANSI/IEEE 352-1987. Should the detector or electronics malfunction, a downscale fail condition is annunciated via a FAIL alarm indication and relay contact. This design ensures that the ion chambers are intact, filled with gas, biased with high voltage, and are continuously responding to ionization events. The electronics test ensures continuity of the electronics. This meets the intent of the original SOURCE CHECK requirement, but not to the exact letter of the definition. Additionally, the electronics includes the capability for injecting a test signal into the detector electronics for an upscale indication.

The new monitors are designed to meet the requirements of NUREG-0737 II.F.1 and the intent of RG 1.97. The monitor's alarm function is used in the EOPs to identify a Steam Generator Tube Rupture (SGTR) event EOP entry point. The Technical Specification setpoint of 10 mR/hr remains unchanged. The R46 monitors are required for post-accident only. There are no normal (10CFR20) effluent monitoring or primary-to-secondary leak detection functions required of these monitors. The R46 monitors have no requirement or capability to detect minor steam generator tube leaks on the order of tens of gallons-per-day. Therefore, there is no adverse consequence to changing the mode applicability from modes 1-4 to modes 1-3.

The goal of the accident monitoring Technical Specification is to ensure that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Asses Plant Conditions During and Following an Accident." This proposed change is consistent with Westinghouse STS, NUREG-1431. The purpose of the monitors contained in Technical Specification 3.3.3.1, per the TS basis is to ensure that:

1. The radiation levels are continuously measured in the areas served by the individual channels, and

2. The alarm or automatic action setpoint is initiated when the radiation level trip setpoint is reached.

There are no changes to setpoints as a result of this change.

The proposed change also eliminates occupational radiation exposure that would be incurred by performing SOURCE CHECKS monthly by exposing the new local detectors to a source inside the penetration room. Even though the source check requirement is being eliminated, by design these new monitors will contain internal to the detector geometry a long-lived source of radioactivity. This will continuously cause ionizations within the chamber, producing a continuous upscale reading, providing an additional level of assurance that the monitor is functional.

SOURCE CHECK Definition Change

The Westinghouse STS, NUREG 1431, do not contain a definition for SOURCE CHECK. The current Salem TS 1.31 definition of SOURCE CHECK is:

1.31 SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

As stated, this is a qualitative assessment, to confirm that the ion chamber is functioning and will respond to an ionizing condition (obtaining an upscale reading). The requirement to actually use a source is overly restrictive, causes unnecessary dose exposure, and does not recognize new detector design that deliberately eliminates the need for an external source to verify response. Equivalent qualitative assessments of detector response can be performed electronically and are part of new detector design. Therefore the following change to the definition of SOURCE CHECK is proposed:

1.31 SOURCE CHECK shall be the qualitative assessment of channel response ~~when the channel sensor is exposed to a source of increased radioactivity~~.

This change will allow for the remaining devices in TS 3.3.3.1 to continue to be source checked via an external source (if preferable by device design), or via an alternative qualitative assessment method if provided in the device design. It is expected that as monitors are replaced with newer designs, qualitative means other than exposure to an external source will be required, similar to the new R46 design. (Note that none of the remaining monitors in TS 3.3.3.1 meet the requirements for relocation to TS 3.3.3.7, which would thereby eliminate the source check requirement entirely, as proposed for the R46 monitors.) Continuing to source check in this proposed manner meets the original intent of the TS 1.31 definition, and exceeds the requirements of NUREG 1431, since the STS no longer contain a definition for SOURCE CHECK.

5. REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change to the R46 monitors presents no change in the probability or the consequence of an accident, since the monitors are used post-accident for the monitoring of high-level releases of radioactive noble gases.

Relocation of the R46 monitors to the accident monitoring TS 3.3.3.7 is appropriate for the function of the monitors. The R46 monitors are designed to meet the requirements of NUREG-0737 II.F.1 and the intent of RG 1.97. The monitor's alarm function is used in the EOPs to identify a Steam Generator Tube Rupture (SGTR) event EOP entry point and to identify which SG has ruptured. The relocation of the monitor to TS 3.3.3.7 has no affect on the function of the monitor.

The proposed change to the definition of TS 1.31 also does not impact the accident analyses in any manner. The qualitative assessment of monitor response will continue to be performed verifying monitor operability.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed relocation of the R46 monitors is primarily administrative in nature; there will be no change in the function of the monitors. No new accident scenarios, failure mechanisms, or limiting single failures are introduced as a result of the proposed changes. Post accident monitoring instrumentation is not associated with the initiation of an accident.

The proposed change to the definition of TS 1.31 also does not create a new or different kind of accident. The qualitative assessment of monitor response will continue to be performed verifying monitor operability.

3. Does the proposed change involve a significant reduction in the margin of safety?

Response: No

The proposed change to relocate the R46 monitors does not alter the manner in which safety limits, limiting safety systems settings or limiting conditions for operation are determined. The proposed change will not alter any assumptions, initial conditions or results specified in any accident analysis. There is no change in the R46 monitor alarm setpoint.

The proposed change to the TS definition of SOURCE CHECK does not alter the basic requirement that a qualitative assessment of the monitor response be performed; therefore the operability of the monitor will continue to be verified.

Based on the above, PSEG concludes that the proposed change presents no significant hazards under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

Relocating the R46 monitors to the Accident Monitoring Technical Specification is in alignment with the technical specification basis and is consistent with Regulatory Guide 1.97 "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident" since one of the parameters that is recommended to be monitored post accident is containment radiation levels. The proposed required surveillance requirements, mode applicability, and actions for inoperability are equivalent to the specification detailed in for Westinghouse standard technical specifications, NUREG-1431.

The proposed change to the definition of TS 1.31 meets the original intent of the TS 1.31 definition, and exceeds the requirements of NUREG 1431, since the STS no longer contain a definition for SOURCE CHECK. Equivalent qualitative assessments of monitor response will continue to be performed verifying operability.

In conclusion, based on the considerations discussed above:

1) There is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner;
2) Such activities will be conducted in compliance with the Commissions' regulations; and
3) Issuance of the amendment will not be inimical to the common defense and security or the health and safety of the public.

6. ENVIROMENTAL CONSIDERATIONS

The only changes will be requiring the R46 monitors to be operable in modes 1-3, as opposed to modes 1-4 and eliminating the need for a SOURCE CHECK in compliance with section 1.31 of the technical specifications. The change to TS definition 1.31 also has involves no physical change. These changes have no adverse impact to off site radiological dose, the R46 monitors are post accident monitors and there is no change to their function.

PSEG has determined the proposed amendment relates to changes in a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or relates to changes in an inspection or a surveillance requirement. The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released off site, or (iii) a significant increase in individual or cumulative occupational exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22 (c) (9). Therefore, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment of the proposed change is not required.

7. REFERENCES

7.1 Regulatory Guide 1.97 "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident."

7.2 NUREG-1431, Revision 3 "Standard Technical Specifications Westinghouse Plants."

SALEM GENERATING STATION UNIT 1 and UNIT 2
FACILITY OPERATING LICENSE NO. DPR-70 and NO. DPR-75
DOCKET NO. 50-272 and NO. 50-311
REVISIONS TO THE TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License DPR-70 are affected by this change request:

Technical Specification	Page
1.0	1-6
3/4.3.3.1	3/4 3-36a and 3-38a
3/4.3.3.7	3/4 3-55, 3-56A and 3-57A

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License DPR-75 are affected by this change request:

Technical Specification	Page
1.0	1-6
3/4 3.3.1	3/4 3-39a and 3-41a
3/4 3.3.7	3/4 3-51A, 3-51C and 3-52A

REACTOR TRIP SYSTEM RESPONSE TIME

1.26 The REACTOR TRIP SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor
until loss of stationary gripper coil voltage.

REPORTABLE EVENT

1.27 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10CFR Part 50.

SHUTDOWN MARGIN

1.28 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be FULLY WITHDRAWN.

SITE BOUNDARY

1.29 The SITE BOUNDARY shall be that line beyond which the land is not owned, leased, or otherwise controlled by the licensee, as shown in Figure 5.1-3, and which defines the exclusion area as shown in Figure 5.1-1.

SOLIDIFICATION

1.30 Not Used

SOURCE CHECK

1.31 SOURCE CHECK shall be the qualitative assessment of channel response ~~when the channel sensor is exposed to a source of increased radioactivity~~.

STAGGERED TEST BASIS

1.32 A STAGGERED TEST BASIS shall consist of:

a. A test schedule for (n) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into (n) equal subintervals.

TABLE 3.3-6 (Continued)
RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
2. PROCESS MONITORS					
b. Noble Gas Effluent Monitors					
1) Medium Range Auxiliary Building Exhaust System (Plant Vent)	1	1,2,3&4	3.0×10^{-2} Ci/cm^3 (Alarm only)	10^{-3}-10^{1} Ci/cm^3	23
2) High Range Auxiliary Building Exhaust System (Plant Vent)	1	1,2,3&4	1.0×10^{2} Ci/cm^3	10^{-1}-10^{5} Ci/cm^3 (Alarm only)	23
~~3) Main Steamline Discharge (Safety Valves and Atmospheric Steam Dumps)~~	~~1/MS Line~~	~~1,2,3&4~~	~~10 mR/hr (Alarm only)~~	~~1-10^{4} mR/hr~~	~~23~~
~~4~~3) Condenser Exhaust System	1	1,2,3&4	1.27×10^{4} cpm (Alarm only)	1-10^{6} cpm	23
3. CONTROL ROOM					
a. Air Intake - Radiation Level	2/Intake##	**	2.48×10^{3} cpm	10^{1}-10^{7} cpm	24, 25

Control Room air intakes shared between Unit 1 and 2.

** ALL MODES and during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

TABLE 4.3-3 (Continued)
RADIATION MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNELS CHECKS	SOURCE CHECKS	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
2. PROCESS MONITORS					
b. Noble Gas Effluent Monitors					
1) Medium Range Auxiliary Building Exhaust System (Plant Vent)	S	M	R	Q	1, 2, 3 & 4
2) High Range Auxiliary Building Exhaust System (Plant Vent)	S	M	R	Q	1, 2, 3 & 4
~~3) Main Steamline Discharge (Safety Valves and Atmospheric Dumps)~~	~~S~~	~~M~~	~~R~~	~~Q~~	~~1, 2, 3 & 4~~
3~~4~~) Condenser Exh. Sys.	S	M	R	Q	1, 2, 3 & 4
3. CONTROL ROOM					
a. Air Intake - Radiation Level	S	M	R	Q	**

** ALL MODES and during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

TABLE 3.3-11 (CONTINUED)

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	REQUIRED NO. OF CHANNELS	MINIMUM NO. OF CHANNELS	ACTION
13. PORV Block Valve Position Indicator	2/valve**	1	1, 2
14. Pressurizer Safety Valve Position Indicator	2/valve**	1	1, 2
15. Containment Pressure - Narrow Range	2	1	1, 2
16. Containment Pressure - Wide Range	2	1	7, 2
17. Containment Water Level - Wide Range	2	1	7, 2
18. Core Exit Thermocouples	4/core quadrant	2/core quadrant	1, 2
19. Reactor Vessel Level Instrumentation System (RVLIS)	2	1	8, 9
20. Containment High Range Accident Radiation Monitor	2	2	10
21. Main Steamline Discharge (Safety Valves and Atmospheric Steam Dumps) Monitor	1/ MS Line	1/ MS Line	10

Item 20. added by LCR S05-06

(**) Total number of channels is considered to be two (2) with one (1) of the channels being any one (1) of the following alternate means of determining PORV, PORV Block, or Safety Valve position: Tailpipe Temperatures for the valves, Pressurizer Relief Tank Temperature Pressurizer Relief Tank Level OPERABLE.

TABLE 3.3-11 (continued)

TABLE NOTATION

ACTION 6 With the number of OPERABLE channels less than the Minimum Number of channels shown in Table 3.3-11, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 7 With the number of OPERABLE channels one less than the Required Number of Channels shown in Table 3.3-11, operation may proceed until the next CHANNEL CALIBRATION (which shall be performed upon the next entry into MODE 5, COLD SHUTDOWN).

ACTION 8 With one RVLIS channel inoperable, restore the RVLIS channel to OPERABLE status within 30 days, or submit a special report in accordance with Specification 6.9.4.

ACTION 9 With both RVLIS channels inoperable, restore one channel to OPERABLE status within 7 days or submit a special report in accordance with Specification 6.9.4.

Action 10 With the number of OPERABLE channels less than required by the minimum channel OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter within 72 hours, and:

1) either restore the inoperable channel(s)to OPERABLE status within 7 days of the event, or

2) prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the actions taken, the cause of the inoperability and the plans and schedule fro restoring the system to OPERABLE status.

Action 10 added by LCR S05-06

TABLE 4.3-11 (Continued)
SURVEILLANCE REQUIREMENTS FOR
ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
12. PORV Position Indicator	M	N.A.	R
13. PORV Block Valve Position Indicator	M	N.A.	Q*
14. Pressurizer Safety Valve Position Indicator	M	N.A.	R
15. Containment Pressure - Narrow Range	M	R	N.A.
16. Containment Pressure - Wide Range	M	R	N.A.
17. Containment Water Level - Wide Range	M	R**	N.A.
18. Core Exit Thermocouples	M	R	N.A.
19. Reactor Vessel Level Instrumentation System (RVLIS)	M	R	N.A.
20. Containment High Range Accident Radiation Monitor	S	R	Q
21. Main Steamline Discharge (Safety Valves and Atmospheric Steam Dumps) Monitor	S	R	Q

Item 20. added by LCR S05-06

*Unless the block valve is closed in order to meet the requirements of Action b, or c in specification 3.4.3.

** A one-time extension to this surveillance requirement is granted during fuel cycle thirteen allowing Unit 1 operations to continue to the thirteenth refueling outage (1R13). The surveillance is to be completed at the appropriate time during the 1R13 outage, prior to the unit returning to Mode 4 upon outage completion.

REACTOR TRIP SYSTEM RESPONSE TIME

1.26 The REACTOR TRIP SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until loss of stationary gripper coil voltage.

REPORTABLE EVENT

1.27 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10CFR Part 50.

SHUTDOWN MARGIN

1.28 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be FULLY WITHDRAWN.

SITE BOUNDARY

1.29 The SITE BOUNDARY shall be that line beyond which the land is not owned, leased, or otherwise controlled by the licensee, as shown in Figure 5.1-3, and which defines the exclusion area as shown in Figure 5.1-1.

SOLIDIFICATION

1.30 Not Used

SOURCE CHECK

1.31 SOURCE CHECK shall be the qualitative assessment of channel response ~~when the channel sensor is exposed to a source of increased radioactivity~~.

STAGGERED TEST BASIS

1.32 A STAGGERED TEST BASIS shall consist of:

a. A test schedule for (n) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into (n) equal subintervals.

TABLE 3.3-6 (Continued)
RADIATION MONITORING INSTRUMENTATION

	OPERABLE	MINIMUM CHANNELS MODES	APPLICABLE SETPOINT RANGE	ALARM/TRIP	MEASUREMENT	ACTION	INSTRUMENT
2.	PROCESS MONITORS						
	b. Noble Gas Effluent Monitors						
	1) Medium Range Auxiliary Building Exhaust System (Plant Vent)	1	1,2,3&4	3.0×10^{-2} □Ci/cm^3 (Alarm only)	10^{-3}-10^{1} □Ci/cm^3		26
	2) High Range Auxiliary Building Exhaust System (Plant Vent)	1	1,2,3&4	1.0×10^{2} □Ci/cm^3 (Alarm only)	10^{-1}-10^{5} □Ci/cm^3		26
	~~3) Main Steamline Discharge (Safety Valves and Atmospheric Steam Dumps)~~	~~1/MS Line~~	~~1,2,3&4~~	~~10 mR/hr (Alarm only)~~	~~$1-10^{4}$ mR/hr~~		~~26~~
	3~~.4~~) Condenser Exhaust System	1	1,2,3&4	7.12×10^{4} cpm (Alarm only)	$1-10^{6}$ cpm		26
3.	CONTROL ROOM						
	a. Air Intake -	2/Intake## Radiation Level	**	2.48×10^{3} cpm	10^{1}-10^{7} cpm		27,28

Control Room air intakes shared between Unit 1 and 2.

** ALL MODES and during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

TABLE 4.3-3 (Continued)
RADIATION MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNELS CHECKS	SOURCE CHECKS	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
2. PROCESS MONITORS					
b. Noble Gas Effluent Monitors					
1) Medium Range Auxiliary Building Exhaust System (Plant Vent)	S	M	R	Q	1, 2, 3 & 4
2) High Range Auxiliary Building Exhaust System (Plant Vent)	S	M	R	Q	1, 2, 3 & 4
~~3) Main Steamline Discharge (Safety Valves and Atmospheric Dumps)~~	~~S~~	~~M~~	~~R~~	~~Q~~	~~1, 2, 3 & 4~~
3~~4~~) Condenser Exh. Sys.	S	M	R	Q	1, 2, 3 & 4
3. CONTROL ROOM					
a. Air Intake - Radiation Level	S	M	R	Q	**

** ALL MODES and during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

TABLE 3.3-11 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	REQUIRED NO. OF CHANNELS	MINIMUM NO. OF CHANNELS	ACTION
13. PORV Block Valve Position Indicator	2/valve**	1	1, 2
14. Pressurizer Safety Valve Position Indicator	2/valve**	1	1, 2
15. Containment Pressure - Narrow Range	2	1	1, 2
16. Containment Pressure - Wide Range	2	1	7, 2
17. Containment Water Level - Wide Range	2	1	7, 2
18. Core Exit Thermocouples	4/core quadrant	2/core quadrant	1, 2
19. Reactor Vessel Level Instrumentation System (RVLIS)	2	1	8, 9
20. Containment High Range Accident Radiation Monitor	2	2	10
21. Main Steamline Discharge (Safety Valves and Atmospheric Steam Dumps) Monitor	1/ MS Line	1/ MS Line	10

Item 20. added by LCR S05-06

(**) Total number of channels is considered to be two (2) with one (1) of the channels being any one (1) of the following alternate means of determining PORV, PORV Block, or Safety Valve position: Tailpipe Temperatures for the valves, Pressurizer Relief Tank Temperature Pressurizer Relief Tank Level OPERABLE.

TABLE 3.3-11 (continued)

TABLE NOTATION

ACTION 6 With the number of OPERABLE channels less than the Minimum Number of channels shown in Table 3.3-11, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 7 With the number of OPERABLE channels one less than the Required Number of Channels shown in Table 3.3-11, operation may proceed until the next CHANNEL CALIBRATION (which shall be performed upon the next entry into MODE 5, COLD SHUTDOWN).

ACTION 8 With one RVLIS channel inoperable, restore the RVLIS channel to OPERABLE status within 30 days, or submit a special report in accordance with Specification 6.9.4.

ACTION 9 With both RVLIS channels inoperable, restore one channel to OPERABLE status within 7 days or submit a special report in accordance with Specification 6.9.4.

Action 10 With the number of OPERABLE channels less than required by the minimum channel OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter within 72 hours, and:

1) either restore the inoperable channel(s)to OPERABLE status within 7 days of the event, or

2) prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the actions taken, the cause of the inoperability and the plans and schedule fro restoring the system to OPERABLE status.

Action 10. added by LCR S05-06

TABLE 4.3-11 (Continued)
SURVEILLANCE REQUIREMENTS FOR
ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	CHANNEL CHECKS	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
12. PORV Position Indicator	M	N.A.	R
13. PORV Block Valve Position Indicator	M	N.A.	Q*
14. Pressurizer Safety Valve Position Indicator	M	N.A.	R
15. Containment Pressure - Narrow Range	M	R	N.A.
16. Containment Pressure - Wide Range	M	R	N.A.
17. Containment Water Level - Wide Range	M	R	N.A.
18. Core Exit Thermocouples	M	R	N.A.
19. Reactor Vessel Level Instrumentation System (RVLIS)	M	R	N.A.
20. Containment High Range Accident Radiation monitor	S	R	Q
21. Main Steamline Discharge (Safety Valves and Atmospheric Steam Dumps) Monitor	S	R	Q

Item 20. added by LCR S05-06

* Unless the block valve is closed in order to meet the requirements of Action b, or c in specification 3.4.5.

Attachment 3 **LCR S06-03**
LR-N06-0125

PROPOSED CHANGES TO TS BASES PAGES

The following Technical Specifications Bases for Salem Generating Station Unit 1 and Unit 2, Facility Operating License Nos. DPR-70 and DPR-75 are affected by this change request:

Technical Specification	Page
Bases 3/4 3.3.1	B 3/4 3-2

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION (Continued)

CROSS REFERENCE - TABLES 3.3-6 AND 4.3-3

Note that Item 1b was deleted based on LCR S05-06

T/S Table Item No.	Instrument Description	Acceptable RMs Channels
1a	Fuel Storage Area	1R5 or 1R9
~~1b~~	~~Containment Area~~	~~1R44A and B~~
2a1a	Containment Gaseous Activity Purge & Pressure/Vacuum Relief Isolation	1R12A or 1R41A, and D(1) (2)
2a1b	Containment Gaseous Activity RCS Leakage Detection	1R12A
2a2a	(NOT USED)	
2a2b	Containment Air Particulate Activity RCS Leakage Detection	1R11A
2b1	Noble Gas Effluent Medium Range Auxiliary Building Exhaust System (Plant Vent)	1R41B & D (1) (3) (5)
2b2	Noble Gas Effluent High Range Auxiliary Building Exhaust System (Plant Vent)	1R41C & D (1) (4) (5)
~~2b3~~	~~Noble Gas Effluent Main Steamline Discharge - Safety Valves and Atmospheric Steam Dumps~~	~~1R46(6)~~
2b4	Noble Gas Effluent Condenser Exhaust System	1R15
3a	Unit 1 Control Room Intake Channel 1 (to Unit 1 Monitor)	1R1B-1
	Unit 1 Control Room Intake Channel 2 (to Unit 2 Monitor)	2R1B-2
	Unit 2 Control Room Intake Channel 1 (to Unit 2 Monitor)	2R1B-1
	Unit 2 Control Room Intake Channel 2 (to Unit 1 Monitor)	1R1B-2

Immediate action(s), in accordance with the LCO Action Statements, means that the required action should be pursued without delay and in a controlled manner.

(1) The channels listed are required to be operable to meet a single operable channel for the Technical Specificiation's "Minimum Channels Operable" requirement.

(2) The setpoint applies to 1R41D. The measurement range applies to 1R41A and B which display in uCi/cc using the appropriate channel conversion factor from cpm to uCi/cc.

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION (Continued)

CROSS REFERENCE - TABLES 3.3-6 and 4.3-3

Note that Item 1b was deleted based on LCR S05-06

T/S Table Item No.	Instrument Description	Acceptable RMs Channels
1a	Fuel Storage Area	2R5 or 2R9
~~1b~~	~~Containment Area~~	~~2R44A and B~~
2a1a	Containment Gaseous Activity Purge & Pressure/Vacuum Relief Isolation	2R12A or 2R41A, B and D(1) (2)
2a1b	Containment Gaseous Activity RCS Leakage Detection	2R12A
2a2a	(NOT USED)	
2a2b	Containment Air Particulate Activity RCS Leakage Detection	2R11A
2b1	Noble Gas Effluent Medium Range Auxiliary Building Exhaust System (Plant Vent)	2R45B(3)
2b2	Noble Gas Effluent High Range Auxiliary Building Exhaust System (Plant Vent)	2R45C(3)
~~2b3~~	~~Noble Gas Effluent Main Steamline Discharge - Safety Valves and Atmospheric Steam Dumps~~	~~2R46(4)~~
2b4	Noble Gas Effluent Condenser Exhaust System	2R15
3a	Unit 2 Control Room Intake Channel 1 (to Unit 2 Monitor) Unit 2 Control Room Intake Channel 2 (to Unit 1 Monitor) Unit 1 Control Room Intake Channel 1 (to Unit 1 Monitor) Unit 1 Control Room Intake Channel 2 (to Unit 2 Monitor)	2R1B-1 1R1B-2 1R1B-1 2R1B-2

(1) The channels listed are required to be operable to meet a single operable channel for the Technical Specification's "Minimum Channels Operable" requirement.

(2) For Modes 1, 2, 3, 4 & 5, the setpoint applies to 2R41D per Specification 3.3.3.9. The measurement range applies to 2R41A and B which display in uCi/cc using the appropriate channel conversion factor from cpm to uCi/cc.

(3) If 2R45 is out of service 2R41 may be used to meet the technical specification action requirement.

(4) Channel 2R46E monitors the effluent from channels 2R46A-D and therefore provides redundancy for each steam line. With one of the 2R46A-D channels inoperable, the 2R46E channel may be relied upon to meet the Technical Specification's "Minimum Channels Operable" requirement.