

PSEG Nuclear LLC

P.O. Box 236, Hancocks Bridge, NJ 08038-0236



JUL 30 2013

10 CFR 50.90

LR-N13-0143
LAR H13-01

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Hope Creek Generating Station
Renewed Facility Operating License No. NPF-57
NRC Docket No. 50-354

**Subject: License Amendment Request to Relocate Safety/Relief Valve Position
Instrumentation to the Technical Requirements Manual**

Pursuant to 10 CFR 50.90, PSEG Nuclear LLC (PSEG) requests an amendment to the renewed facility operating license listed above. The proposed changes would relocate the operability and surveillance requirements for the reactor coolant system safety/relief valve (SRV) position instrumentation from the Hope Creek Generating Station (Hope Creek) Technical Specifications (TS) to the Hope Creek Technical Requirements Manual (TRM).

The affected TS are: Accident Monitoring Instrumentation, 3.3.7.5 and 4.3.7.5, and Safety/Relief Valves, 3.4.2.1 and 4.4.2.1. As part of the proposed change, the operability and surveillance requirements for the SRV position instrumentation will be relocated verbatim into the Hope Creek TRM.

Attachment 1 of this submittal provides an evaluation supporting the proposed changes. Attachment 2 provides the marked-up TS pages, with the proposed changes indicated. No regulatory commitments are contained in this submittal.

The changes in this License Amendment Request (LAR) are not required to address an immediate safety concern; PSEG requests approval of this LAR in accordance with standard NRC approval process and schedule. Once approved, the amendment will be implemented within 60 days from the date of issuance.

These proposed changes have been reviewed by the Plant Operations Review Committee. PSEG has concluded that the proposed changes present no significant hazards consideration under the standards set forth in 10 CFR 50.92.

PSEG is notifying the State of New Jersey of this LAR by transmitting a copy of this letter and its attachments to the designated State Official.

If you have any questions or require additional information, please contact Ms. Emily Bauer at (856)339-1023.

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

Executed on 7/30/2013
(Date)

Sincerely,



Paul J. Davison
Site Vice President
Hope Creek Generating Station

Attachments:

1. Evaluation of Proposed Changes
2. Technical Specification Pages with Proposed Changes

cc: W. Dean, Administrator, Region I, USNRC
J. Hughey, Project Manager, USNRC
NRC Senior Resident Inspector, Hope Creek
P. Mulligan, Manager IV, NJBNE
P. Bonnett, Commitment Tracking Coordinator, Hope Creek
L. Marabella, Corporate Commitment Tracking Coordinator

License Amendment Request to Relocate Safety/Relief Valve Position Instrumentation to the Technical Requirements Manual

Evaluation of Proposed Changes

Table of Contents

1.0 DESCRIPTION.....2

2.0 PROPOSED CHANGES2

3.0 BACKGROUND3

4.0 TECHNICAL ANALYSIS.....4

5.0 REGULATORY ANALYSIS6

6.0 ENVIRONMENTAL CONSIDERATION8

7.0 REFERENCES.....8

1.0 DESCRIPTION

In accordance with the provisions of 10 CFR 50.90, PSEG Nuclear LLC (PSEG) requests an amendment to renewed facility operating license NPF-57 for the Hope Creek Generating Station (Hope Creek).

The proposed change would remove the operability and surveillance requirements for the reactor coolant system safety/relief valve (SRV) position instrumentation from the Technical Specifications (TS) for Accident Monitoring Instrumentation, 3.3.7.5 and 4.3.7.5, and from the TS for Safety/Relief Valves, 3.4.2.1 and 4.4.2.1.

As part of the proposed change, the operability and surveillance requirements for the SRV position instrumentation will be relocated verbatim into the Hope Creek Technical Requirements Manual (TRM). The TRM is controlled in a manner consistent with procedures fully or partially described in the Hope Creek Updated Final Safety Analysis Report (UFSAR), and under the provisions of 10 CFR 50.59. Future changes to the operability and surveillance requirements for the SRV position instrumentation will be performed pursuant to 10 CFR 50.59

The proposed change conforms to the provisions of 10 CFR 50.36 for the contents of Technical Specifications, and to the improved standard TS approved by the NRC in NUREG-1433, "Standard Technical Specifications – General Electric BWR/4 Plants" (Reference 1).

2.0 PROPOSED CHANGES

The proposed license amendment would remove the following items from the TS and relocate them to the TRM:

1. Item 9, "Safety/Relief Valve Position Indicators" from Table 3.3.7.5-1, "Accident Monitoring Instrumentation" on page 3/4 3-85, in TS 3.3.7.5. This table identifies the operability requirements for this instrumentation. With the number of OPERABLE channels less than the Minimum Number of Channels, the associated action statement requires the inoperable channel to be restored to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

The associated footnote to be relocated reads: "Acoustic monitoring and tail pipe temperature."

2. Item 9, "Safety/Relief Valve Position Indicators" from Table 4.3.7.5-1, "Accident Monitoring Instrumentation Surveillance Requirements" on page 3/4 3-87, in TS 4.3.7.5. This table identifies the surveillance requirements for this instrumentation. Channel checks and channel calibrations are required to be performed in Operational Conditions 1, 2, and 3 in accordance with the Surveillance Frequency Control Program.
3. TS 3.4.2.1.c on page 3/4 4-7. This specification reads: "With one or more of the above required safety/relief valve acoustic monitors inoperable, restore the inoperable monitors to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours."

4. TS 4.4.2.1 on page 3/4 4-8. This specification reads: "The acoustic monitor for each safety/relief valve shall be demonstrated OPERABLE with the setpoint verified to be $\leq 30\%$ of full open noise level by performance of a:
 - a. CHANNEL FUNCTIONAL TEST in accordance with the Surveillance Frequency Control Program, and a
 - b. CHANNEL CALIBRATION in accordance with the Surveillance Frequency Control Program."

There are no Bases section changes proposed in this LAR because SRV position instrumentation is not specifically identified in the applicable Bases sections. Upon approval of the proposed changes, the operability and surveillance requirements for the SRV position instrumentation will be incorporated into the Hope Creek TRM.

3.0 BACKGROUND

Technical Background

The Nuclear Pressure Relief System, including the main steam line safety/relief valves, provides overpressure protection for the reactor coolant pressure boundary (RCPB). Each of the 14 SRVs provide two main protective functions: (1) overpressure safety operation – the valves open automatically to limit a pressure rise, and (2) depressurization operation – the Automatic Depressurization System (ADS) valves open automatically as part of the Emergency Core Cooling System (ECCS) for events involving small breaks in the RCPB. Low-low set relief logic is provided for two of the SRVs. This automatic control system ensures that containment, SRV discharge lines, and reactor overpressure protection design bases are not exceeded. It accomplishes this by providing these valves with altered setpoints that are lower than the normal SRV spring-set opening and closing pressure setpoints.

The Safety Relief Valve Position Indication System (SRVPIS) provides the control room operator with OPEN/CLOSED indication for all 14 SRVs, and provides an alarm to alert the operator to abnormal SRV position. SRVPIS is an acoustic monitoring system consisting of accelerometers that are strap mounted to the discharge piping downstream of each SRV, as close as possible to the valve. When an SRV is open, the accelerometer senses the flow noise created by the steam passing through the discharge piping and produces a signal proportional to the flow through the pipe. This signal is amplified by a preamplifier located outside the primary containment and transmitted to a signal conditioning unit located in the SRVPIS control panel in the main control room. The signal conditioning unit processes the signal and provides the operator with OPEN/CLOSED SRV position indication and an alarm if the valve is determined to be open. The SRVPIS does not provide input to a control or trip function.

The SRVPIS is addressed as the safety/relief valve acoustic monitors in TS 3.4.2.1 / 4.4.2.1. It is also addressed as the Safety/Relief Valve Position Indicators in TS 3.3.7.5 / 4.3.7.5, along with the SRV tailpipe temperature indicators.

SRV tailpipe temperature indication consists of one thermocouple installed in the discharge line of each SRV, mounted several feet downstream from the valve body. Thermocouple output is indicated on a multipoint recorder in the main control room. A temperature increase in the discharge piping can indicate that the SRV is leaking or open. Temperature increases above ambient are alarmed in the main control room. The SRV tailpipe temperature indicators do not

provide input to a control or trip function. The SRV acoustic monitors and SRV tailpipe temperature indicators are collectively referred to as SRV position instrumentation or SRV position indication.

The Suppression Pool Temperature Monitoring System (SPTMS) monitors bulk suppression pool temperature, providing indication that one or more SRVs may not be closed. The Hope Creek SPTMS consists of 16 sensors that are divided into two redundant channels. Each channel consists of eight sensors located symmetrically around the suppression pool in order to provide a reasonable measure of bulk temperature.

Regulatory Background

On July 22, 1993, the NRC published its "Final Policy Statement of Technical Specifications Improvements for Nuclear Power Reactors," 58 FR 39132 (Reference 2). This Final Policy Statement established a set of objective criteria as guidance for determining which regulatory requirements and operating restrictions should be included in TS, as follows:

- (1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;
- (2) a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (3) a structure, system, or component that is part of the primary success path and which function or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

These four criteria were later incorporated into 10 CFR 50.36, "Technical specifications."

The Final Policy Statement also provided that LCOs which do not meet any of the four criteria may be removed from the TS and relocated to licensee-controlled documents, such as the Final Safety Analysis Report (FSAR). Changes to the facility or to procedures described in the FSAR are subject to the controls of 10 CFR 50.59. NRC-approved NUREG-1433, "Standard Technical Specifications – General Electric BWR/4 Plants," identifies an improved standard TS that was developed based on the criteria in the Final Policy Statement.

The proposed changes are consistent with similar changes approved for Limerick Generating Station, Units 1 and 2 on September 27, 2005 (Amendment Nos. 179 and 141, Reference 3), and for Fort Calhoun Station, Unit No. 1 on September 30, 2011 (Amendment No. 268, Reference 4).

4.0 TECHNICAL ANALYSIS

The proposed license amendment relocates the SRV position instrumentation operability and surveillance requirements from the Hope Creek Technical Specifications. Operability and surveillance requirements will be incorporated into the Hope Creek TRM. The TRM is controlled in a manner consistent with procedures fully or partially described in the Hope Creek UFSAR,

and under the provisions of 10 CFR 50.59. The TRM has been used to capture and control other requirements associated with previous Hope Creek license amendments, including Hope Creek Generating Station Amendment No. 171 (Reference 5), which relocated the primary containment isolation valve table to the TRM. Hope Creek Amendment No. 171 also established the TRM as a licensee-controlled document included in the UFSAR and controlled under the provisions of 10 CFR 50.59.

As discussed in the Regulatory Background section, an NRC Final Policy Statement concluded that those existing TS requirements which do not satisfy one of the four criteria incorporated in 10 CFR 50.36 may be removed from the TS and relocated to a licensee-controlled document, subject to the controls of 10 CFR 50.59.

Regulatory Guide (RG) 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," Revision 2 (Reference 6), describes a method acceptable to the NRC staff for complying with regulations to provide instrumentation to monitor plant variables and systems during and following an accident in a light-water-cooled nuclear power plant. Type A variables are those to be monitored that provide the primary information required to permit the control room operator to take specific manually controlled actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for design basis accident events. Category 1 instruments are designed for full qualification, redundancy, continuous real-time display, and onsite (standby) power.

NUREG-1433 established improved standard TS for BWR/4 plants. The post accident monitoring instrumentation TS notes several functions that must be covered in TS, including all RG 1.97, Type A instruments, as well as all Category 1, non-Type A instruments specified in the plant's RG 1.97 Safety Evaluation Report. The Hope Creek UFSAR documents compliance with RG 1.97. Specifically, Hope Creek has identified the following Type A variables:

- Reactor pressure (HC Category 1, RG Category 1)
- Coolant level in reactor (HC Category 1, RG Category 1)
- Suppression pool water temperature (HC Category 1, RG Category 1)
- Suppression pool water level (HC Category 1, RG Category 1)
- Drywell pressure (HC Category 1, RG Category 1)

The Hope Creek UFSAR identifies "Primary System Safety Relief Valve Position, Including ADS or Flow Through or Pressure in Valve Lines" as Type D, Category 2 Variables, consistent with RG 1.97. Type D variables are those variables that provide information to indicate the operation of individual safety systems and other systems important to safety. Category 2 instruments are designed to less stringent qualifications that do not require seismic qualification, redundancy, or continuous display, and require only a high reliability power source, not necessarily standby power. Relocating the SRV position instrumentation from the TS to the TRM conforms with the NRC position on application of the screening criteria to post-accident monitoring instrumentation.

The safety/relief valves themselves are part of the primary success path in the UFSAR accident analysis because they are assumed to actuate to mitigate a Design Basis Accident (DBA) and therefore meet Criterion 3 of the NRC Final Policy Statement. The operability of the SRVs is therefore required by TS 3.4.2, "Safety/Relief Valves." However, SRV position indication, including the acoustic monitors and the tailpipe temperature indicators, does not detect or

indicate a significant abnormal degradation of the reactor coolant pressure boundary, as required by Criterion 1. This is consistent with the NRC Final Policy Statement, which provided that Criterion 1 is intended to ensure that those instruments specifically installed to detect excessive reactor coolant system leakage be included in the TS. Criterion 1 is not to be interpreted to include instrumentation installed to identify the source of actual leakage, for example valve position indicators.

SRV position indication is not a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis considered in Criterion 2.

While the function of the SRVs themselves is part of the primary success path in the UFSAR, SRV position indication is not part of the primary success path. UFSAR accident analysis assumes that the SRVs open as designed to reduce reactor pressure and no operator action based on SRV position indication is required. Therefore, SRV position indication is not part of the primary success path as indicated in Criterion 3.

The loss of SRV position instrumentation has no effect on the probabilistic safety assessment, and has not been shown to be significant to health and safety as considered in Criterion 4.

The Emergency Operating Procedures (EOPs) provide symptom-based instruction to the operating staff in mitigating an upset condition of the plant. Individual EOPs using SRV position can be accomplished regardless of whether SRV position instrumentation is available; i.e. for Emergency Depressurization and RPV Flooding.

Therefore, SRV position instrumentation does not meet any of the four screening criteria of the Final Policy Statement. This conclusion is supported by the absence of operability and surveillance requirements for the SRV position instrumentation in the improved standard Technical Specifications (ISTS) presented in NUREG-1433. Accordingly, this proposed change conforms to the ISTS, and SRV position instrumentation requirements can be established in a licensee-controlled document, the Hope Creek TRM. Future changes to SRV position instrumentation requirements in the TRM will be subject to the controls of 10 CFR 50.59.

5.0 REGULATORY ANALYSIS

10 CFR 50.36 (a)(1) requires that each applicant for a license authorizing operation of a production or utilization facility shall include in its application proposed TS in accordance with the requirements of section 50.36. The TS are part of the facility operating license and any changes to the operating license and TS must be in accordance with 10 CFR 50.90. The changes proposed by this license amendment request conform to these regulations.

No Significant Hazards Consideration

PSEG requests an amendment to the Hope Creek Operating License. The proposed changes would remove the operability and surveillance requirements for the reactor coolant system safety/relief valve position instrumentation from the Technical Specifications for the Hope Creek Generating Station. The affected TS sections are: Accident Monitoring Instrumentation, 3.3.7.5 and 4.3.7.5, and Safety/Relief Valves, 3.4.2.1 and 4.4.2.1. As part of the proposed change, the operability and surveillance requirements for the SRV position instrumentation will be relocated as written into the Hope Creek Technical Requirements Manual.

PSEG has evaluated the proposed changes to the TS, using the criteria in 10 CFR 50.92, and determined that the proposed changes do not involve a significant hazards consideration. The following information is provided to support a finding of no significant hazards consideration.

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

Response: No

The proposed changes to the TS would relocate the operability and surveillance requirements for the SRV position instrumentation from the TS to the TRM. The failure of this instrumentation is not assumed to be an initiator of any analyzed event in the UFSAR. The proposed changes do not alter the design of the SRVs or any other system, structure, or component (SSC). The proposed changes conform to NRC regulatory guidance regarding the content of plant TS, as identified in 10 CFR 50.36, NUREG-1433, and the NRC Final Policy Statement in 58 FR 39132.

Therefore, these proposed changes do not represent a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No

The proposed changes to the TS would relocate the operability and surveillance requirements for the SRV position instrumentation from the TS to the TRM. The proposed changes do not involve a modification to the physical configuration of the plant or change in the methods governing normal plant operation. The proposed changes will not impose any new or different requirement or introduce a new accident initiator, accident precursor, or malfunction mechanism.

Additionally, there is no change in the types or increases in the amounts of any effluent that may be released off-site and there is no increase in individual or cumulative occupational exposure. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Do the proposed changes involve a significant reduction in a margin of safety?

Response: No

The proposed changes to the TS would relocate the operability and surveillance requirements for the SRV position instrumentation from the TS to the TRM. This instrumentation is not needed for manual operator action necessary for safety systems to accomplish their safety function for the design basis events. The SRV position instrumentation, including the acoustic monitors and the tailpipe temperature indicators, provides only alarm and position indication functions and does not provide an input to any automatic trip function.

Several diverse means are available to monitor SRV position, including the Suppression Pool Temperature Monitoring System. Operability and surveillance requirements will be established in a licensee-controlled document, the TRM, to ensure the reliability of SRV position monitoring capability. Changes to these requirements in the TRM will be subject to the provisions of 10 CFR 50.59, providing an appropriate level of regulatory control.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

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

In conclusion, based on the considerations discussed above, (1) there is a 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 NRC's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, 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 effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. NUREG-1433, Volume 1, Specifications, Revision 4.0, "Standard Technical Specifications – General Electric BWR/4 Plants," dated April 2012, ADAMS Accession No. ML12104A192
2. NRC "Final Policy Statement of Technical Specifications Improvements for Nuclear Power Reactors," dated July 22, 1993, 58 FR 39132
3. Limerick Generating Station, Units 1 and 2 – Issuance of Amendment Re: Relocation of Operability and Surveillance Requirements for the Safety/Relief Valve Position Instrumentation (TAC Nos. MC3454 and MC3455), dated September 27, 2005, ADAMS Accession No. ML052550369
4. Fort Calhoun Station, Unit No. 1 – Issuance of Amendment Re: Revision of Technical Specifications to Relocate Power-Operated Relief Valve/Safety Valve Position and Tail Pipe Temperature Instrumentation (TAC No. ME4542), dated September 30, 2011, ADAMS Accession No. ML112620402

Attachment 1

LAR H13-01

LR-N13-0143

5. Hope Creek Generating Station – Issuance of Amendment Re: Relocate Component Lists for Primary Containment Isolation Valves from Technical Specifications (TAC No. MD3600), dated August 27, 2007, ADAMS Accession No. ML071430403
6. US NRC Regulatory Guide (RG) 1.97, “Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident,” Revision 2, dated December 1980

Technical Specification Pages with Proposed Changes

The following Technical Specification pages for **Renewed Facility Operating License No. NPF-57** are affected by this change request:

Technical Specification	Page
Table 3.3.7.5-1	3/4 3-85
Table 4.3.7.5-1	3/4 3-87
3.4.2.1.c	3/4 4-7
4.4.2.1	3/4 4-8

TABLE 3.3.7.5-1

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NUMBER OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>
1. Reactor Vessel Pressure	2	1	1,2,3	80
2. Reactor Vessel Water level	2	1	1,2,3	80
3. Suppression Chamber Water level	2	1	1,2,3	80
4. Suppression Chamber Water Temperature*	2	1	1,2,3	80
5. Suppression Chamber Pressure	2	1	1,2,3	80
6. Drywell Pressure	2	1	1,2,3	80
7. Drywell Air Temperature	2	1	1,2,3	80
8. Deleted				
9. Safety/Relief Valve Position Indicators	2/valve**	1/valve**	1,2,3	80
10. Drywell Atmosphere Post-Accident Radiation Monitor	2	1	1,2,3	80
11. North Plant Vent Radiation Monitor #	1	1	1,2,3	81
12. South Plant Vent Radiation Monitor #	1	1	1,2,3	81
13. FRVS Vent Radiation Monitor #	1	1	1,2,3	81
14. Primary Containment Isolation Valve Position Indication ##	2/valve	1/valve	1,2,3	82

Deleted

* Average bulk pool temperature.

**/ Acoustic monitoring and tail pipe temperature.

High range noble gas monitors.

One channel consists of the open limit switch, and the other channel consists of the closed limit switch.

TABLE 4.3.7.5-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK (a)</u>	<u>CHANNEL CALIBRATION (a)</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>
1. Reactor Vessel Pressure			1,2,3
2. Reactor Vessel Water Level			1,2,3
3. Suppression Chamber Water Level			1,2,3
4. Suppression Chamber Water Temperature			1,2,3
5. Suppression Chamber Pressure			1,2,3
6. Drywell Pressure			1,2,3
7. Drywell Air Temperature			1,2,3
8. Deleted.			
9. Deleted.			
9. Safety/Relief Valve Position Indicators			1,2,3
10. Drywell Atmosphere Post-Accident Radiation Monitor		**	1,2,3
11. North Plant Vent Radiation Monitor#			1,2,3
12. South Plant Vent Radiation Monitor#			1,2,3
13. FRVS Vent Radiation Monitor#			1,2,3
14. Primary Containment Isolation Valve Position Indication			1,2,3

Deleted

(a) Frequencies are specified in the Surveillance Frequency Control Program unless otherwise noted in the table.

** CHANNEL CALIBRATION shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/hr and a one point calibration check of the detector below 10 R/hr with an installed or portable gamma source.

High range noble gas monitors.

REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY/RELIEF VALVES

SAFETY/RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.4.2.1 The safety valve function of at least 13 of the following reactor coolant system safety/relief valves shall be OPERABLE*# with the specified code safety valve function lift settings:**

- 4 safety-relief valves @ 1108 psig ±3%
- 5 safety-relief valves @ 1120 psig ±3%
- 5 safety-relief valves @ 1130 psig ±3%

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With the safety valve function of two or more of the above listed fourteen safety/relief valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With one or more safety/relief valves stuck open, provided that suppression pool average water temperature is less than 110°F, close the stuck open safety relief valve(s); if unable to close the stuck open valve(s) within 2 minutes or if suppression pool average water temperature is 110°F or greater, place the reactor mode switch in the Shutdown position.

- c.

With one or more of the above required safety/relief valve acoustic monitors inoperable, restore the inoperable monitors to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Deleted →

*SRVs which perform as ADS function must also satisfy the OPERABILITY requirements of Specification 3.5.1, ECCS-Operating.

**The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures.

#SRVs which perform a low-low set function must also satisfy the OPERABILITY requirements of Specification 3.4.2.2, Safety/Relief Valves Low-Low Set Function.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.2.1 The acoustic monitor for each safety/relief valve shall be demonstrated OPERABLE with the setpoint verified to be $\leq 30\%$ of full open noise level by performance of a:

- a. CHANNEL FUNCTIONAL TEST in accordance with the Surveillance Frequency Control Program, and a
- b. CHANNEL CALIBRATION in accordance with the Surveillance Frequency Control Program.

Deleted

4.4.2.2 At least 1/2 of the safety relief valve pilot stage assemblies shall be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations in accordance with the Surveillance Frequency Control Program, and they shall be rotated such that all 14 safety relief valve pilot stage assemblies are removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations in accordance with the Surveillance Frequency Control Program. All safety relief valves will be re-certified to meet a $\pm 1\%$ tolerance prior to returning the valves to service after setpoint testing.

4.4.2.3 The safety relief valve main (mechanical) stage assemblies shall be set pressure tested, reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations in accordance with the Surveillance Frequency Control Program.