



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 225 AND 206 TO FACILITY OPERATING

LICENSE NOS. DPR-70 AND DPR-75

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated November 14, 1997, as supplemented on August 25, 1999, the Public Service Electric & Gas Company (the licensee) submitted a request for changes to the Salem Nuclear Generating Station, Unit Nos. 1 and 2, Technical Specifications (TSs). The requested changes would revise the TSs to make administrative and editorial changes to correct errors in the TSs that have either existed since initial issuance or were introduced during subsequent changes. In addition, the requested changes would add surveillance requirements that should have been incorporated within the TSs when the applicable amendments to the TSs were approved by the NRC. The August 25, 1999, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

2.1 Background

In its November 14, 1997, and August 25, 1999, letters, the licensee proposed a number of administrative and editorial changes to correct errors in the facility TSs. These changes can generally be described as:

- a. Revisions to the index to reflect correct page numbers of corresponding sections,
- b. Revisions to the section titles used in the TS sections, Bases, and Tables, as well as the correction and addition of subtitles to obtain standardization between both Salem units' TSs,
- c. Revision to the TS references that refer to other TS sections and tables to either provide the correct reference or to provide more specificity by referring to actual subsections,

- d. Spelling and grammatical corrections such as elimination of duplicate or extraneous words, proper pluralization, more standard abbreviations,
- e. Renumbering of TS Tables,
- f. Capitalize terms found in TS 1.0 when used in other TS sections,
- g. Add units of measure that were missing from acceptance criterion, and
- h. Other administrative changes

## 2.2 Evaluation

The following examples are typical of the revisions as previously characterized:

### 2.2.1 Revisions to Indexes

The licensee has proposed to revise the Salem Units 1 and 2 TSs indexes to correct the listed titles and page numbers. These changes will reflect the titles as used in the various TS sections and correlate the page numbers in each index to the correct TS pages.

The NRC staff has found that these changes correct errors in the referenced items in the indexes and are acceptable.

### 2.2.2 Revisions to Titles

The licensee has proposed changes to various titles of TS sections and the inclusion of several subsection titles. Some of the title changes correct errors in the title such as in TS Bases 5.4.1, the title would be corrected from "Design Feature and Temperature" to "Design Pressure and Temperature." Some of the changes will also make the title more adequately reflect the technical content of the applicable TS section such as the title for TS 3/4.1.3.4 will be changed from "Position Indication System Shutdown" to "Shutdown Rod Insertion Limit." In addition, some of the changes will make the titles and subtitles consistent between the Salem Unit 1 and 2 TSs, such as the subtitle, "All Water Levels," will be added to Salem 1 TS 3/4.9.8.1 which is already included in the similar Salem Unit 2 TS section.

The licensee has also proposed changing the column heading "Calibration" to "Channel Calibration" in TS Table 4.3-1, "Reactor Trip System Instrumentation Surveillance Requirements," to make the title consistent with the terminology used in SR 4.3.1.1.1. Because the change does not revise the actual requirement and makes the terminology consistent with other TS sections and the plant maintenance procedures, the NRC staff finds the change to be acceptable.

Since the proposed changes make the TS titles and subtitles more technically correct and improve the consistency between the TSs for each unit, the NRC staff finds them acceptable.

### 2.2.3 Correction of References

Within the TSs there are a number of references within Limiting Conditions for Operations (LCOs), Action Statements, and Surveillance requirements (SRs) that refer to and/or direct actions within similar requirements in other TS sections. Therefore, the referenced TS Section must be correct. The licensee has proposed changes to correct these reference errors that were, in part, created during prior changes to the TSs. As an example, Salem Unit 1 SR

4.6.3.1.5 refers to measured leakage rates determined pursuant to SR 4.6.1.2d. However, the leak rates are determined in SR 4.6.1.2.b.

The NRC staff finds these changes to be acceptable because the changes correct errors that currently exist in various TS sections.

#### 2.2.4 Spelling and Grammatical Corrections

- a. The licensee has proposed a number of changes that will correct spelling and grammatical errors that currently exist in the TSs. Included with these changes, the licensee has proposed changing abbreviation for "not applicable" from "NA" to "N.A." "startup" from "SU" to "S/U."
- b. Grammatical errors such as (1) the incorrect use of words like conjunctions or adverbs as in TS Action statement 3.5.3.b that should read "With no ECCS subsystem OPERABLE" rather than "Within no ECCS subsystem OPERABLE," or (2) the lack of the verb "occur" in TS Bases 3/4.4.8 and 3/4.4.9 for Salem Units 1 and 2, respectively.
- c. The word "degradation" was inadvertently deleted after the word "additional" in Salem Unit 1 TS 4.4.5.3.b during Amendment No. 118. Since the word was inadvertently deleted and its addition makes the sentence grammatically correct, the NRC staff finds the change to be acceptable.

The NRC staff has reviewed each of the proposed corrections. Since each change was administrative in nature, the NRC staff finds them to be acceptable.

#### 2.2.5 Renumbering TS Tables

The license has proposed renumbering Salem Unit 1 TS Table 4.4-4, "Reactor Coolant System Pressure Isolation Valves," to 4.4-3 and to change the reference to this table in TS 3/4.4.6.3. The licensee stated that this change is necessary since there is a second Table 4.4-4 titled "Primary Coolant Specific Activity Sample and Analysis Program." The NRC staff finds that this corrects the duplication in table numbers and is acceptable.

#### 2.2.6 Capitalization of Terms

The licensee has proposed to change "Core Alterations" to "CORE ALTERATIONS" in TS Tables 3.3-6 and 4.3-2 (Unit 1 only). The licensee has also proposed to capitalize the word "operable" to change it to "OPERABLE" in TS 3.7.10. The NRC staff finds this acceptable since it is consistent with the capitalization of the term as defined in TS 1.9.

#### 2.2.7 Missing Units of Measure

The licensee has proposed the addition of various units of measure to clarify acceptance criteria within LCOs. These units of measure do not change the specific values used in the actual criteria. For example, TS 3.5.5.a requires the contained volume of water in the refueling water storage tank to be between 364,500 and 400,000 of borated water. The unit of measure

- gallons in this case - is missing. Since the addition of these units of measure makes the acceptance criteria more correct, the NRC staff finds the changes to be acceptable.

#### 2.2.8 Other Changes

- a. Table 2.2-1, "Reactor Trip System Instrumentation Setpoints," incorrectly lists one of the reactor trip system inputs. Specifically, Functional Unit item 18 lists a safety injection input from SSPS (solid state protection system). Since the engineered safety features (ESF) provides the actual trip input and not SSPS, item 18 is revised to state safety injection input from ESF.
- b. TS surveillance requirement 4.1.1.1.1.b requires that "control bank withdrawl" be verified to be within the limits specified in TS 3.1.3.5. However, TS 3.1.3.5 describes the control bank position as "control bank insertion." Rather than use either "withdrawl" or "insertion," the licensee proposes to state in TS 4.1.1.1.1.b that the "control banks are" within the specified limits.
- c. In TS Table 4.3-1, "Reactor Trip System Instrumentation Surveillance Requirements," the surveillance requirement for reactor coolant pump breaker position trip is listed as not being applicable to any operational mode in which the surveillance would be required. Since this trip is required to be operable during Mode 1 (power operation), this change will ensure that a valid surveillance test will have been completed prior to entering Mode 1. Also, it will make the requirement consistent with the reactor coolant pump undervoltage and underfrequency mode requirements.
- d. In Salem Unit 2 TS Table 4.3-1, the surveillance requirements for reactor trip from turbine trip as sensed by low autostop oil pressure and turbine stop valve closure are listed as not being applicable to any operational mode in which the surveillance would be required. Since TS Table 4.3-1 states that a Channel Functional Test is required prior to startup (Mode 2), this change will ensure that the required modes are consistent with the test requirement. Also, the change from not applicable to Modes 1 and 2 makes the Salem Unit 2 TS requirement consistent with the Unit 1 TS.
- e. In Salem Unit 2 TS Table 4.3-2, "Engineered Safety Feature Actuation System Instrumentation Surveillance Requirements," the surveillance requirement for the automatic initiation logic of the semiautomatic transfer to recirculation (functional unit item 9.b) lists the channel functional test as not being applicable. Although the licensee had proposed this test to be conducted monthly, it was inadvertently issued as not applicable in Salem Unit 2 Amendment No. 69. Thus, the proposed change corrects this error to now require this periodic channel functional test.
- f. Action 5 to TS Table 3.3-11 discusses alternate means for conducting reactor coolant system subcooling margin calculation. The licensee stated that in Amendment Nos. 117 and 95 for Salem Units 1 and 2, respectively, the reference to this action requirement was deleted for the subcooling margin monitor. However, Action 5 was not deleted from the list of Actions. Since Action 5 is not referenced (used) by any parameters listed in Table 3.3-11, the NRC staff finds its deletion to be acceptable.

- g. TS Table 4.3-11, "Surveillance Requirements for Accident Monitoring Instrumentation," details the Channel Functional Test frequency for the power-operated relief valves (PORVs), the PORV block valves, and pressurizer safety valve position indicators. However, the surveillance requirements in TS 4.3.3.7 for accident monitoring instrumentation do not currently require the performance of the channel functional tests. The proposed change will make the TS surveillance requirement consistent with Table 4.3-11.
- h. In the footnote (Footnote #) to TS Table 4.3-12, item 1.a, the licensee proposes changing terminology for the verification of count rate on the liquid effluent monitor (R18) from a "channel check" to a "source check." The licensee states that the term "channel check" implies a verification of the reasonableness of the inservice reading through comparison to another instrument channel. In the case of the R18 monitor, there are no other channels. Therefore, the R18 monitor is functionally checked by verification of sufficient count rate indication. This method is more appropriately described as a "source check." Since the terminology and not the actual requirement is being changed, the NRC staff finds this to be acceptable.
- i. The data included under the column labeled "Channels Operable" in TS Table 4.3-13, "Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance Requirements," provides the frequency for performing channel checks on the applicable instrumentation. Labeling the column as "Channel Check" would be correct and consistent with the data and the surveillance requirements in TS 4.3.3.9.
- j. TS Table 4.3-3, "Radiation Monitoring Instrumentation Surveillance Requirements," includes, in part, a requirement for monthly source checks for the listed instruments. TSs 4.4.6.1 for Salem Unit-1, 4.4.7.1 for Unit 2, and 4.3.3.1 for both units refer to Table 4.3-3. Although these sections identify the other surveillance requirements in the Table, the source check requirement is not stated. The licensee has proposed the addition of the source check to these TS sections for consistency. The NRC staff finds this to be acceptable.
- k. The footnote for the Applicability of Salem Unit 1 TS 3.4.1.3 states, in part, that the pressurizer water volume of 1650 cubic feet is equivalent to approximately 92 percent of level. Although not part of the revisions requested during Amendment No. 72, the water level value was inadvertently changed from "93.2" to "92" percent. Since the pressurizer water level of 93.2 percent corresponds more accurately to the specified volume of 1650 cubic feet, the NRC staff finds the change to be acceptable.
- l. The NRC's safety evaluation for Amendment No. 24 for Salem Unit 1 provided the staff's acceptance of the channel functional test of the Pressurizer Overpressure Protection Systems (POPS) on an every 31-day interval whenever POPS is required to be operable. However, the requirement was not added to the actual TS 3/4.4.9.3. Since the proposed change adds the requirement to TS 3/4.9.3, incorporates the licensee's current test practice, and is consistent with the previously approved amendment, the NRC staff finds it to be acceptable.
- m. Salem Unit 2 SR 4.6.1.1 states, in part, that all penetrations not capable of being closed by operable containment automatic isolation valves and required to be closed during

accident conditions be verified closed, except for valves that may be opened under administrative control. The licensee stated that the words "may be opened" were proposed to be changed to "are open" in Amendment No. 172. However, SR 4.6.1.1 was not revised when the Amendment was issued. Since the change in wording restricts the scope of the exception and is as approved in the prior amendment, the NRC staff finds the change to be acceptable.

- n. The reference to TS Table 3.6-1 in the Salem Unit 2 TS 3.6.1.2.b would be deleted. The Table itself was removed from the TSs by Amendment Nos. 189 and 172 for Salem Units 1 and 2, respectively. Although the reference was deleted from the Salem Unit 1 TS, it was erroneously not deleted for Unit 2. Since the Table was previously removed and the proposed change will make TS 3.6.1.2.b consistent between both units, the staff finds it to be acceptable.
- o. The current Action requirement for Item 3.a, "Air Intake - Radiation Level," to TS Table 3.3-6, "Radiation Monitoring Instrumentation," references one note (note 27) that covers the actions in response to both (1) having one less than the minimum number of channels operable and (2) having no channels operable. The licensee has proposed dividing this note into two separate notes (27 and 28). Since the requirements are not being modified and both notes are listed for Item 3.a, the NRC staff considers this to be an administrative change and finds it acceptable.
- p. In Salem Unit 1 Amendment No. 206, a footnote was added to grant a one-time change to TSs 3.6.1.1, 3.6.1.2, and 3.6.1.7 to allow opening the containment exhaust and/or purge valves in Modes 3 and 4 following refueling outage 1R13. In Salem Unit 2 Amendment No. 198, a footnote was added to various surveillance requirements to grant a one-time extension of the surveillance interval until the restart of the unit from refueling outage 2R10. Since the allowed periods for these amendments have elapsed, the licensee has proposed removing the footnotes. The staff finds these administrative changes to be acceptable.

#### 2.2.9 Summary

The NRC staff has reviewed each of the proposed editorial and administrative changes that were proposed by the licensee and finds them to be acceptable. Additionally, the staff has reviewed the proposed changes to the surveillance requirements and finds them to be acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendments. The State official commented that the proposed corrections to references to Salem Unit 1 TS Figure 3.1-3 were no longer relevant since the figure had been deleted in Amendment Nos. 201 and 202. In its August 25, 1999, letter, the licensee corrected its application by removing the proposed change since it had already been implemented by previous amendments.

#### 4.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact was published in the Federal Register on October 20, 1999 (64 FR 56523).

Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of these amendments will not have a significant effect on the quality of the human environment.

#### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (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 Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: November 2, 1999