

April 1, 2005

Mr. William Levis  
Senior Vice President & Chief Nuclear Officer  
PSEG Nuclear LLC - X04  
Post Office Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2, ISSUANCE  
OF AMENDMENTS RE: TECHNICAL SPECIFICATION DEFINITION OF  
"OPERABLE" (TAC NOS. MC3857 AND MC3858)

Dear Mr. Levis:

The Commission has issued the enclosed Amendment Nos. 264 and 246 to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Nuclear Generating Station, Unit Nos. 1 and 2, respectively. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated July 23, 2004, as supplemented January 6, 2005.

These amendments modify the TS definition of "OPERABLE" with respect to requirements for availability of normal and emergency power. Additionally, the required actions for shutdown TSs are modified.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

*/RA/*

Daniel Collins, Senior Project Manager, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosures: 1. Amendment No. 264 to  
License No. DPR-70  
2. Amendment No. 246 to  
License No. DPR-75  
3. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page

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PUBLIC	CHolden	RJenkins	ECobey, RGN-I
PDI-2 Reading	DRoberts	TBoyce	GHill(4)
ACRS	DCollins	CRaynor	OGC

ACCESSION NUMBER: ML050800251

\* SE Input Provided

OFFICE	PDI-2/PM	PDI-2/LA	EEIB/SC*	IROB/SC*	OGC	PDI-2/SC
NAME	DCollins	CRaynor	RJenkins	TBoyce	MYoung	VNerses for DRoberts
DATE	3/25/05	3/24/05	3/15/05	3/08/05	3/23/05	4/1/05

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PSEG NUCLEAR, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 264  
License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by PSEG Nuclear, LLC and Exelon Generation Company, LLC (the licensee) dated July 23, 2004, as supplemented January 6, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-70 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 264, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA by Victor Nerses for/*

Darrell J. Roberts, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: April 1, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 264

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

1-4  
3/4 8-5c  
3/4 8-7  
3/4 8-10  
3/4 8-13  
B 3/4 8-2  
B 3/4 8-3  
B 3/4 8-4

Insert Pages

1-4  
3/4 8-5c  
3/4 8-7  
3/4 8-10  
3/4 8-13  
B 3/4 8-2  
B 3/4 8-3  
B 3/4 8-4

PSEG NUCLEAR, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 246  
License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by PSEG Nuclear LLC and Exelon Generation Company, LLC (the licensee) dated July 23, 2004, as supplemented January 6, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-75 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 246, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA by Victor Nerses for/*

Darrell J. Roberts, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: April 1, 2005



ATTACHMENT TO LICENSE AMENDMENT NO. 246

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

1-4  
3/4 8-7a  
3/4 8-9  
3/4 8-12  
3/4 8-15  
B 3/4 8-2  
B 3/4 8-3  
B 3/4 8-4

Insert Pages

1-4  
3/4 8-7a  
3/4 8-9  
3/4 8-12  
3/4 8-15  
B 3/4 8-2  
B 3/4 8-3  
B 3/4 8-4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 264 AND 246 TO FACILITY OPERATING  
LICENSE NOS. DPR-70 AND DPR-75  
PSEG NUCLEAR, LLC  
EXELON GENERATION COMPANY, LLC  
SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-272 AND 50-311

## 1.0 INTRODUCTION

By letter dated July 23, 2004, as supplemented January 6, 2005, PSEG Nuclear, LLC (PSEG or the licensee) submitted a request for changes to the Salem Nuclear Generating Station, Unit Nos. 1 and 2 (SGS 1 and 2), Technical Specifications (TSs). The requested changes would modify the TS definition of "OPERABLE" with respect to requirements for availability of normal and emergency power. Additionally, the required actions for shutdown TSs would be modified. These proposed changes will extend the relief granted by Amendment Nos. 253 and 234 to shutdown modes and allow declaring supported equipment inoperable rather than always suspending core alterations. The proposed changes are consistent with NUREG-1431, "Standard Technical Specifications - Westinghouse Plants," Rev. 3 (STS). The January 6, 2005, letter provided clarifying information and provided a revised proposed no significant hazards consideration determination that was published in the Federal Register on March 1, 2005 (70 FR 9983).

In response to a staff request for additional information (RAI) dated November 24, 2004, the licensee provided a complete set of revised proposed changed TS pages that replace the corresponding pages submitted on July 23, 2004 (License Change request LCR S04-06). Therefore, the staff's evaluation is based on the licensee's submittal dated January 6, 2005.

The following evaluation addresses the proposed changes to TS 3.8.1.2, "Electrical Power Systems - Shutdown" and TS 3.8.2, "Electrical Distribution - Shutdown". These TSs are applicable to Modes 5 and 6, during core alterations, and during movement of irradiated fuel.

## 2.0 REGULATORY EVALUATION

The Nuclear Regulatory Commission's (NRC or the Commission) requirements related to the content of TSs are set forth in Section 50.36 of Title 10 of the *Code of Federal Regulations*. This regulation requires that the TSs include items in five specific categories. These categories include 1) safety limits, limiting safety system settings and limiting control settings, 2) limiting

conditions for operation (LCOs), which include allowed outage times, 3) surveillance requirements (SRs), 4) design features, and 5) administrative controls. The proposed changes to TS 3.8.1 and TS 3.8.2 are associated with actions permitted by the TSs when the LCOs are not met.

The proposed changes to the TS action requirements are subject to the following criteria. Section 50.36(c)(2)(i) of 10 CFR sets forth the criteria for LCOs in TSs. Section 50.36(c)(2)(i) of 10 CFR states:

(2) *Limiting condition for operation.* (i) Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shutdown the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

General Design Criterion (GDC)-17, "Electric Power System," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 requires, in part, that nuclear power plants have an onsite and offsite electric power system to permit the functioning of structures, system and components important to safety. The onsite system is required to have sufficient independence, redundancy and testability to perform its safety function, assuming a single failure, and the offsite system is required to be supplied by two independent circuits. In addition, this criteria requires provisions to minimize the probability of losing electric power from the remaining electric power supplies as the result of loss of power from the unit, the offsite transmission network, or the onsite power supplies.

GDC-18, "Inspection and Testing of Electric Power Systems," requires that electric power systems that are important to safety must be designed to permit appropriate periodic inspection and testing.

### 3.0 EVALUATION OF PROPOSED CHANGES

The SGS proposed TS changes would revise the "OPERABLE" definition to allow equipment to be considered operable with either normal or emergency electrical power available. In addition, operability requirements for the alternating current (AC) and direct current (DC) distribution subsystems during Modes 5 and 6 would be revised. The proposed changes are consistent with the STS, NUREG-1431, Rev 3.

#### 3.1 Revised definition of OPERABLE

The current SGS TS definition of OPERABLE reads as follows:

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

This definition considers systems, subsystems, trains, components and devices to be operable

provided that both normal and emergency electrical power sources are operable for the supported systems, subsystems, trains, components and devices. Thus when one source of electrical power is inoperable, the current definition requires the supported systems, subsystems, trains, components and devices be declared inoperable and the associated Action Statements entered. The licensee proposed that the definition of OPERABLE be revised to redefine electrical power source requirements. The new definition of OPERABLE would read as follows:

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

The licensee states that revising the definition of OPERABLE will coordinate with the LCOs of TS section 3/4 3.8. The proposed change will provide outage scheduling flexibility and avoid unnecessary disruption of refueling activities while still providing for appropriate actions to assure plant safety.

In the November 24, 2004, RAI, the staff asked the licensee to address the global effect on all TSs of the change of the definition of OPERABLE. The licensee responded by letter dated January 6, 2005, to the staff's question on the global effect of this change on all TSs. The licensee states that the SGS TSs were revised by License Amendment No. 253 (Unit 1) and No. 234 (Unit 2) expressively to allow operation, during Modes 1-4 to be governed by the time limits of the LCO of the normal or emergency power source rather than the corresponding Action Statements for each affected system or component or LCO 3.0.3. By not changing the definition of OPERABLE with License Amendment Nos. 253 and 234, an inconsistency was created between the definition of OPERABLE and LCO 3.8.1.1. The current SGS TSs can be interpreted to require equipment supported by an inoperable AC source to also be declared inoperable, since the definition of OPERABLE in the SGS TSs specifies that both normal and emergency power are needed. However, TS 3.8.1.1 allows operation up to 24 hours for an AC circuit, 12 hours for 2 inoperable AC circuits, or 4 hours for a diesel generator (DG) before equipment supported by an inoperable AC source needs to be declared inoperable. If the redundant supported equipment is inoperable, TS 3.8.1.1 is intended to allow operation to be governed by the time limits of the Action Statement associated with the LCO of the normal or emergency power source, rather than a corresponding Action Statement for each affected system or component.

The proposed change to the definition of OPERABLE removes potential ambiguity from the SGS TSs and will allow operation to be governed by the time limits of the Action Statement associated with the LCO for normal or emergency power sources, and not the individual Action Statements for each system, subsystem, train, component, or device that would currently be considered inoperable solely because of the inoperability of its normal or emergency electrical power source. The NRC staff agrees that the proposed change to the definition of OPERABLE improves the clarity of the TSs and does not compromise the level of safety afforded to the

supported systems, subsystems, trains, components and devices. Therefore, the NRC staff concludes that this change is acceptable because it does not affect the manner in which the plant is operated in a way that is safety-significant.

### 3.2 Changes to TS 3.8.1.2 “Electrical Power Systems - Shutdown”

The licensee has added additional wording, “During movement of irradiated fuel assemblies,” to the Applicability Section. This change is consistent with the STS. The staff interprets it to mean that during Modes 5 and 6, and during movement of irradiated fuel assemblies, TS 3.8.1.2 applies.

In addition, the licensee has proposed changes to the LCO of TS 3.8.1.2. For shutdown, SGS TS 3.8.1.2 requires a minimum of one operable circuit between the transmission network and the Class 1E buses (offsite power), and two operable emergency diesel generators (EDGs) (onsite power) to support shutdown and refueling operations. The current Action Statement reads as follows:

With less than the minimum required AC electrical power sources operable, suspend all operations involving core alterations or positive reactivity changes until the minimum required AC electrical power sources are restored to operable status.

In its submittal, the licensee proposed two new Action Statements that address the condition of one electrical power source inoperable and the condition of two EDGs inoperable. The proposed Action Statements would read as follows:

- a. With one of the above minimum required AC electrical power sources not operable, immediately declare the affected required features inoperable, or suspend all operations involving core alterations, movement of irradiated fuel, and positive reactivity changes until the minimum required AC electrical power sources are restored to operable status.
- b. With two of the required diesel generators not operable, suspend all operations involving core alterations, movement of irradiated fuel, and all operations involving positive reactivity additions, and immediately initiate action to restore one required DG to operable status.

With an inoperable offsite power source or one EDG inoperable, proposed Action Statement (a.) gives the licensee an option to either declare affected features inoperable, or suspend core alterations until the minimum required AC electrical power sources are restored to operable status. In this scenario, the EDG’s required by TS 3.8.1.2 and TS 3.8.2.2 are capable of supporting sufficient required features to allow continuation of core alterations and irradiated fuel movement. By declaring required features associated with the AC electrical power sources inoperable, appropriate restrictions will be implemented in accordance with the Required Actions specified in the LCOs for the affected AC distribution subsystems.

If one of the required EDG's becomes inoperable, an operable offsite power circuit can supply power to the distribution train to support core alterations and movement of irradiated fuel assemblies. Since there is no configuration requirement during shutdown to have components powered from their dedicated trains, it is acceptable for trains to be cross-tied. Therefore, a single offsite power circuit can supply power to the required trains.

With two of the required EDGs inoperable, the proposed Action Statement (b.) requires suspending core alterations and movement of irradiated fuel until one EDG is restored to operable status. An operable EDG ensures the availability of a diverse power source to provide electrical power support, assuming a loss of the offsite circuit. If both of the required EDG's become inoperable, the minimum required diversity of AC power sources is not available. It is, therefore, required to suspend core alterations and movement of irradiated fuel movement until one EDG is restored to operable status.

The allowance of declaring affected features inoperable does not preclude completion of actions to establish a safe conservative condition. It is further required to immediately initiate action to restore the required AC electrical power distribution subsystems to provide the necessary power to the unit safety systems.

During Modes 5 and 6, and during movement of irradiated fuel assemblies, the operability of the minimum AC sources ensures that the unit can be maintained in the shutdown or refueling condition for extended periods, and adequate AC electrical power is provided to mitigate events postulated during shutdown, such as a fuel handling accident. The staff approved changes to the SGS TS 3.8.1.1, "AC Sources Operating," (Amendment Nos. 253 and 234) to allow operation during Modes 1-4 to be governed by the time limits of the LCO of the normal or emergency power source, rather than the corresponding Action Statements for each affected system or component. The changes requested by the licensee to TS 3.8.1.2, extend the same relief that was granted by Amendment Nos. 253 and 234 to shutdown modes and allow declaring supported systems inoperable, rather than always suspending core alterations. The proposed changes are intended to provide outage flexibility and avoid unnecessary disruption to refueling activities while providing for appropriate actions to assure plant safety. The proposed changes to TS 3.8.1.2 are consistent with the STS 3.8.2, "Electrical Power Systems - Shutdown" in NUREG -1431, Rev. 3; therefore, they are acceptable. Based on the above and the consistency with the Improved Standard Technical Specifications (ISTS), the NRC staff finds the proposed revision to TS 3.8.1.2 acceptable.

### 3.3 Changes to TSs 3.8.2.2, 3.8.2.4 and 3.8.2.6

The SGS current TSs require suspending core alterations when an AC or DC source is lost in Modes 5 and 6 or during movement of irradiated fuel. The proposed changes to TS 3.8.2.2, 3.8.2.4 and 3.8.2.6 allow an option to take action in accordance with the LCO for the affected required features when the required power source (AC or DC) or distribution system is lost. Also, the proposed changes allow an option to take action to suspend all operations involving core alterations or positive reactivity changes until the minimum required power sources or distribution system are restored to operable status. The proposed changes are reasonable since not all power source or distribution system inoperabilities affect equipment required for core alterations or positive reactivity changes. The LCOs for the affected required features contain requirements to address the condition and to discontinue core alterations or positive reactivity changes when it is appropriate. In general, during Modes 5 and 6 the TS

requirements ensure that the plant has the capability to mitigate the consequences of postulated accidents. However, assuming a single failure and concurrent loss of all offsite or all onsite power is not required. Worst-case bounding events are deemed not credible in Modes 5 and 6 because the energy contained within the reactor pressure boundary, reactor coolant temperature and pressure, and the corresponding stresses result in the probabilities of occurrence being significantly reduced or eliminated, and in minimal consequences. Relaxations from operating mode (Modes 1-4) LCO requirements during shutdown (Modes 5 and 6) are justified because activities are planned and administratively controlled, outage time is limited and the risk associated with multiple activities that could affect multiple systems is controlled.

The proposed changes ensure that all required loads are powered from the offsite power with an onsite Class 1E DG backup. This ensures a diverse power source is available to provide electrical power support, assuming a loss of the offsite circuit.

### 3.3.1 Changes to TS 3.8.2.2 "AC Distribution - Shutdown"

During Modes 5 and 6, SGS TS 3.8.2.2 requires a minimum of two AC electrical bus trains operable and energized, with specified AC vital buses and control centers in each train energized from a source of power other than a DG, but aligned to an operable DG. The minimum vital bus requirements for each AC distribution train are:

- a) one (1) 4-Kv Vital Bus
- b) one (1) 460-volt Vital Bus and associated control centers
- c) one (1) 230-volt Vital Bus and associated control centers
- d) one (1) 115-volt Instrument Bus energized from its respective inverter connected to its respective DC bus train

If less than the minimum required AC vital buses are operable, the current Action Statement requires suspending all operations involving core alterations or positive reactivity changes until the minimum required AC electrical power sources are restored to operable status. In its submittal, the licensee proposed a new Action Statement. The proposed Action Statement would read as follows:

With less than the above complement of AC buses and inverters operable and energized, immediately declare the affected required features inoperable, or suspend all operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies until the minimum required AC electrical power sources are restored to operable status.

With one of the required AC vital buses or control centers in one train de-energized, the proposed change gives the licensee an option to either declare the affected required features inoperable, or suspend core alterations until the required vital bus or control center is returned to operable status. Although redundant-required features require redundant trains of electrical power distribution subsystems to be operable, one operable distribution subsystem train is capable of supporting sufficient required features to allow continuation of core alterations and movement of irradiated fuel. By declaring the required features associated with the AC distribution subsystem(s) inoperable, appropriate restrictions will be implemented in accordance with the Required Actions specified in the LCOs for the affected required features.

### 3.3.2 Changes to TS 3.8.2.4 “125-Volt DC Distribution - Shutdown”

During Modes 5 and 6, SGS TS 3.8.2.4 requires a minimum of two 125-volt DC buses operable and two 125-volt batteries, each with at least one full-capacity charger, associated with each of the above DC buses, in operable condition to support shutdown or refueling operations. With less than the above complement of DC equipment and buses operable, the current Action Statement requires suspending all operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies until the minimum required 125-volt DC electrical power sources are restored to operable status. In its submittal, the licensee proposed a new Action Statement. The proposed Action Statement would read as follows:

With less than the above complement of DC equipment and buses operable, immediately declare the affected required features inoperable, or suspend all operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies until the minimum required 125-volt DC electrical power sources are restored to operable status.

If the required DC equipment and buses become inoperable, the proposed change gives the licensee an option to either declare the affected required features inoperable, or suspend core alterations until the minimum required 125-volt DC electrical power sources are returned to operable status. Although redundant-required features require redundant trains of electrical power distribution subsystems to be operable, one operable distribution subsystem train is capable of supporting sufficient required features to allow continuation of core alterations and movement of irradiated fuel. By declaring the required features associated with the 125-volt DC distribution subsystem inoperable, appropriate restrictions will be implemented in accordance with the Required Actions specified in the LCOs for the affected required features.

The allowance of declaring affected features inoperable does not preclude completion of actions to establish a safe conservative condition. It is further required to immediately initiate action to restore the required DC electrical power distribution subsystems to provide the necessary power to the unit safety systems.

### 3.3.3 Changes to TS 3.8.2.6 “28-Volt DC Distribution - Shutdown”

During Modes 5 and 6, SGS TS 3.8.2.6 requires a minimum of one 28-volt DC bus operable and one 28-volt battery and at least one full-capacity charger associated with the above DC bus, in operable condition to support shutdown or refueling operations. With less than the above complement of DC equipment and buses operable, the current Action Statement requires suspending all operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies until the minimum required 28-volt DC electrical power sources are restored to operable status. In its submittal, the licensee proposed a new Action Statement. The proposed Action Statement would read as follows:

With less than the above complement of DC equipment and buses operable, immediately declare the affected required features inoperable, or suspend all operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies until the minimum required 28-volt DC electrical power sources are restored to operable status.



If the required DC equipment and buses become inoperable, the proposed change gives the licensee an option to either declare the affected required features inoperable, or suspend core alterations until the minimum required 28-volt DC electrical power sources are returned to operable status. Although redundant-required features require redundant trains of electrical power distribution subsystems to be operable, one operable distribution subsystem train is capable of supporting sufficient required features to allow continuation of core alterations and movement of irradiated fuel. By declaring the required features associated with the 28-volt DC distribution subsystem inoperable, appropriate restrictions will be implemented in accordance with the Required Actions specified in the LCOs for the affected required features.

The proposed changes to TSs 3.8.2.2, 3.8.2.4 and 3.8.2.6 (AC and DC sources and distribution during Modes 5 and 6 and during movement of irradiated fuel assemblies) are consistent with the STS Sections 3.8.2, 3.8.5, 3.8.8 and 3.8.10. These changes would provide flexibility from overly-restrictive actions and at the same time continue to assure that the plant is placed in a safe condition during Modes 5 and 6. Based on the above considerations, the NRC staff concludes that the proposed changes are acceptable because they do not erode the current level of safety and are consistent with NUREG-1431.

#### 3.4 Changes to TS 3/4.8 Bases text

The licensee also proposed to add a paragraph to the current TS 3/4.8 Bases text. The new text states that "An offsite circuit would be considered inoperable if it were not available to one required train. Although two trains are required by TS 3.8.2.2 and TS 3.8.2.4, the one train with offsite power available may be capable of supporting sufficient required features to allow continuation of core alterations and irradiated fuel movement." This text was extracted from NUREG-1431, Rev. 3.

It is acceptable for trains to be cross-tied during shutdown conditions, allowing a single offsite power circuit to supply required trains. Per TS 3.8.2.2, two trains shall be operable, and with no offsite power operable, the operable DG aligned to the inoperable train(s) is capable of supplying power to the required features that support core alterations.

Also the new Bases text states that "by the allowance of the option to declare required features inoperable, with no offsite power available, appropriate restrictions will be implemented in accordance with the affected required features LCOs actions." The new text also states that "with the offsite circuit not available or diesel generator not available to all required trains, the option exists to declare all required features inoperable." In the case of both DGs inoperable, the minimum required diversity of AC power sources is not available, as discussed above, and per TSs, it is required to suspend core alterations, movement of irradiated fuel assemblies, and operations involving positive reactivity additions that could result in loss of required shutdown margin or boron concentration.

The staff has reviewed the paragraph addition to TS 3/4.8 Basis. It explains the offsite and onsite power source requirements during Modes 5 and 6 or during movement of irradiated fuel assemblies presented in LCOs 3.8.1.2 and 3.8.2.2. The staff finds the proposed Bases changes appropriately describe requirements governing the design and operation of the electrical power systems. Therefore, the NRC staff does not object to the proposed Bases changes.

### 3.5 Editorial Changes

The licensee, in its response dated January 6, 2005, to the staff's RAI, identified several editorial changes to the proposed changed SGS TS pages. These changes are listed below :

- a. The statement of the surveillance requirements 4.8.2.2 and 4.8.2.6.1 for Salem Unit 1 have been changed to conform to the wording of the like surveillance for Salem Unit 2. The Unit 1 SR 4.8.2.2 has added "and inverters" and changed "indicated power availability" to "voltage on the bus." The Unit 1 SR 4.8.2.6.1 has changed "indicated power availability" to "voltage on the bus."
- b. A period has been added to the Note for Salem Unit 2 to correct the number of the referenced surveillance requirements 4.8.1.1.2.g.

Since the above proposed changes are of editorial nature, there is no change in the intent in the SGS TSs. Therefore, the NRC staff concludes that they are acceptable.

### 3.1 SUMMARY

The proposed changes revise the definition of OPERABLE to require that a system, subsystem, train, component, or device have its normal or emergency power supply operable for the component to be considered operable, and revise AC and DC electrical power systems specifications TS 3.8.1.2, TS 3.8.2.2, TS 3.8.2.4, and TS 3.8.2.6. Each of these proposed changes have been evaluated in accordance with the requirements of 10 CFR 50.36 and have been determined not to adversely affect nuclear safety or continued safe plant operations.

The staff concludes that the proposed TS changes requested by the licensee are consistent with the ISTS and do not result in fewer required features being available without backup power than the current specifications allow. Further, the proposed changes do not alter the way any structure, system or component functions, do not significantly alter equipment out-of-service time and do not significantly change the manner in which the plant is operated. The proposed changes will provide outage scheduling flexibility and avoid unnecessary disruption of refueling activities while still providing for appropriate actions to assure plant safety. The staff also concludes that the proposed changes do not affect SGS's compliance with the requirements of GDC-17 and 18, and are consistent with NUREG-1431, Rev. 3. Further, SGS continues to meet the requirements of GDC-17 and 18, and 10 CFR 50.36. Therefore, the proposed changes are acceptable.

### 4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The regulations at 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations, if 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, (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.

These amendments have been evaluated against the standards in 10 CFR 50.92 as discussed below:

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

Response: No.

The likelihood of an event is not significantly increased since the proposed changes do not alter the types of equipment required to be OPERABLE to supply the minimum required diversity of AC power. Also, the probability of occurrence or the consequences for an accident is not significantly increased by the proposed changes since the minimum configuration of equipment required by [an] individual TS will remain available. Further, the proposed changes do not alter the way any structure, system or component (SSC) functions, do not significantly modify the manner in which the plant is operated, and do not significantly alter equipment out-of-service time. The change to the difference between 1 hour under LCO 3.0.3 and 4 hours under LCO 3.8.1.1 Action b is not significant since the likelihood of a Design Basis Event (DBE) combined with a Loss of Offsite Power (LOOP) during the additional 3 hours is so low as to be not significant. The allowance for one EDG to supply all required features in Modes 5 & 6 is not operationally or safety significant since all required features will continue to have required backup power. Further, no changes to the design of structures, systems, or components (SSC) are made and there are no effects on accident mitigation.

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

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

Response: No.

The possibility of a new or different kind of accident from any accident or malfunction in the Salem Updated Final Safety Analysis Report (UFSAR) is not created. The allowable outage time is consistent with requirements of Improved Standard Technical Specifications and does not introduce any new or different failure from any previously evaluated or change the manner in which safety systems are operated. The associated system and equipment configurations are no different from those previously evaluated. Therefore a different accident is not created. In addition, the proposed changes cannot initiate an accident. Further, the proposed changes do not change the design function or operation of any SSCs.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

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

Response: No.

The proposed changes continue to provide assurance that an event coincident with failure of an associated diesel generator or offsite power circuit will not result in complete loss of safety function of critical required redundant systems or equipment. In addition, the proposed changes do not change the margin of safety since no SSCs are changes. The results of accident analysis remain unchanged by the proposed changes.

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

Based on this review, the Commission has made a final determination that these amendments involve no significant hazards considerations.

## 5.0 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 had no comments.

## 6.0 COMMENTS RECEIVED

By letter dated March 7, 2005, the Union of Concerned Scientists (UCS), on behalf of UCS and the UNPLUG Salem Campaign, submitted comments regarding these proposed amendments. In summary, the commenter opines that the amendment requests should be denied because the licensee is "cherry-picking" from the ISTS in order to improve profits. The commenter further asserts that such selective implementation of ISTS reduces safety margins and imposes undue burden on the NRC staff as a result of the staff having to conduct reviews of numerous submittals that individually implement small portions of the ISTS.

### *NRC Staff evaluation of comments:*

On July 19, 1995 (60 FR 36953), the Commission published a final rule regarding TS improvements for nuclear power reactors. The background discussion provided with the final rule stated, "... The Commission continues to encourage licensees to use the improved STS as the basis for plant-specific technical specifications. As stated in the final policy statement, the Commission will place the highest priority on requests based on the criteria for individual license amendments that are used to evaluate all of the LCOs for an individual plant to determine which LCOs should be included in the technical specifications. Related surveillance requirements and actions would be retained for each LCO that remains in the technical specifications.... Such requests would constitute complete conversions to the improved STS .... In addition, *the Commission will also entertain requests to adopt portions of the improved STS, even if the licensee does not adopt all STS improvements (emphasis added).*" Hence, PSEG's request to amend the SGS TSs definition of OPERABLE and revise the TSs regarding electrical sources is allowed by the TS improvement process envisioned when the ISTS were developed. The asserted inconvenience to the NRC staff does not provide a legitimate basis for denial of the amendment requests.

With regard to the asserted reduction in safety margins, the commenter provided no specific information to demonstrate that margins would be reduced by the proposed amendments. The NRC staff's review of these amendment requests considered the potential affects that the

licensee's request would have on required equipment during Modes 5 and 6, and when moving irradiated fuel. The NRC staff determined that the requested changes would allow the licensee flexibility in the management of its AC sources while still ensuring the operability of required equipment. Hence, the NRC staff determined that the requested changes would not result in significant reduction of safety margins.

## 7.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration (70 FR 9983). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

## 7.0 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.

## 8.0 REFERENCES

1. PSEG Nuclear LLC transmittal of an Application for Amendment to the Salem Generating Station Operating License DPR-70 and DPR-75 to the NRC, July 23, 2004. (NRC Docket Number 50-272 and 50-311, TAC Numbers MC3857 and MC3858, ADAMS Accession Number ML042160223)
2. NUREG-1431, "Standard Technical Specifications - Westinghouse Plants", Volume 1, Revision 3, June 2004.

3. PSEG Nuclear LLC Response to the Request for Additional Information: Request for Change to Technical Specifications - Definition of Operable, January 6, 2005, ADAMS Accession Number ML042160223)

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Date: April 1, 2005