

Public Service  
Electric and Gas  
Company

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**REQUEST FOR LICENSE AMENDMENT  
DEFERRAL OF SURVEILLANCE REQUIREMENTS  
SALEM GENERATING STATION UNIT 2  
FACILITY OPERATING LICENSE NOS. DPR-75  
DOCKET NO. 50-311**

Gentlemen:

In accordance with the requirements of 10CFR50.90, Public Service Electric and Gas Company (PSE&G) hereby requests a revision to the Technical Specifications (TS) for Salem Generating Station Unit 2. As required by 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

The requested amendment proposes one-time changes to certain Unit 2 Technical Specification surveillance requirements for fuel cycle 10. The proposed changes will allow Unit 2 operation to continue to the tenth refueling outage (2R10), currently scheduled to begin on April 2, 1999. Without the proposed relief, several surveillance requirements would require Unit 2 to be shutdown prior to the scheduled date of the outage. The surveillance requirements involved are: 4.3.2.1.3 (Instrumentation, Engineered Safety Feature Actuation System Instrumentation); 4.8.2.3.2.f, (Electrical Power Systems, 125V D.C. Distribution); and 4.8.2.5.2.c.2 and 4.8.2.5.2.d (Electrical Power Systems, 28 Volt D.C. Distribution). This amendment does not change the bases for the TS.

PSE&G has evaluated this change per 10CFR50.91(a)(1), using 10CFR50.92(c) criteria, and concluded that this request involves no significant hazards.

The basis for the requested changes is provided in Attachment 1. The 10CFR50.92 analysis supporting the no significant hazards determination is provided in Attachment 2. The marked-up Technical Specification pages affected by the proposal are provided in Attachment 3.

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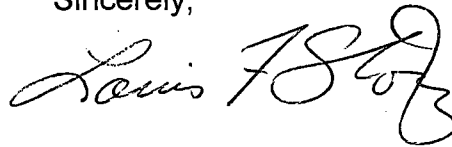
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Approval of this request is needed by December 15, 1998 in order to allow time to implement the amendment prior to February 10, 1999, which is when the first surveillance requirement requiring a shutdown exceeds its overdue date.

Upon NRC approval of this proposed revision, PSE&G requests that the amendment be made effective upon issuance, allowing a period of sixty days for implementation to provide sufficient time for associated administrative activities.

Should you have any questions regarding this request, we will be pleased to discuss them with you.

Sincerely,



Affidavit  
Attachments (3)



OCT 12 1998

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**SALEM GENERATING STATION UNIT 2  
FACILITY OPERATING LICENSE NO. DPR-75  
DOCKET NO. 50-311  
CHANGE TO TECHNICAL SPECIFICATIONS (TS)  
DEFERRAL OF SURVEILLANCE REQUIREMENTS**

**BASIS FOR REQUESTED CHANGE**

**BACKGROUND**

Salem Unit 2 was removed from service in June of 1995. On June 9, 1995, the Nuclear Regulatory Commission (NRC) issued a Confirmatory Action Letter. Subsequently, PSE&G conducted a comprehensive review of our operational readiness. This review led to the development of the Salem Restart Plan (SRP). The SRP consisted of a comprehensive and systematic approach for the identification, review, approval, assessment and affirmation of the activities needed to support the restart and reliable operation of the Salem Units. Completion of the SRP and resolution of other emergent issues resulted in the outage lasting for over two years. Permission to restart Unit 2 was given by the NRC in June of 1997, and Mode 2 was first achieved on August 17, 1997.

Required surveillances were performed during the extended shutdown, however, because of the length of the outage and delays in the restart, some surveillance requirements will be/would have been overdue prior to reaching the next refuel outage currently planned to start on 4/2/99 (2R10). Two maintenance outages were conducted during the current cycle (cycle 10). During these outages the majority of the surveillances, which would have been overdue by 2R10, were performed. The surveillance requirements discussed above were not performed because their performance would have significantly impacted the return of the unit to service from these outages and because there is reasonable justification for their deferral. Continued operation during Unit 2 fuel cycle 10 is reasonable, prudent, and consistent with protection of public health and safety.

**REQUESTED CHANGE AND PURPOSE**

This amendment modifies Technical Specification surveillance requirements 4.3.2.1.3 (Instrumentation, Engineered Safety Feature Actuation System Instrumentation); 4.8.2.3.2.f, (Electrical Power Systems, 125V D.C. Distribution); and 4.8.2.5.2.c.2 and 4.8.2.5.2.d (Electrical Power Systems, 28 Volt D.C. Distribution) on a one-time basis, for Salem Unit 2.

The proposed amendment will modify the above referenced T.S. surveillance requirements by adding a note to allow a one-time exemption for cycle 10. The purpose of this change is to compensate for the extended duration of the Salem Unit 2 1995 – 1997 outage by deferring certain surveillance requirements to 2R10 thus avoiding the undesirable effects of an unnecessary forced outage. This is accomplished through a one-time amendment to Technical Specifications 4.3.2.1.3; 4.8.2.3.2.f; and 4.8.2.5.2.c.2 and 4.8.2.5.2.d.

### **JUSTIFICATION FOR REQUESTED CHANGES**

For ease of review the surveillance requirements are considered below in two groupings with the 125-Volt and 28 Volt D.C. distribution surveillance requirements considered together.

#### **4.3.2.1.3 (Instrumentation, Engineered Safety Feature Actuation System Instrumentation)**

This surveillance requirement is partially satisfied by performing relay time response and sequence testing of the safeguard equipment control (SEC) system. The other surveillance testing which is performed to satisfy 4.3.2.1.3 will not be overdue until after the start of 2R10.

Unit 2 has three SEC trains. The surveillance requirement for the trains will be overdue on the following dates: 2A SEC – 3/21/99; 2B - 4/6/99; and 2C – 3/20/99. The Technical Specification surveillance requirement frequency is once per 18 months. This request asks that the requirement be deferred to the outage (2R10) to be performed during the appropriate window during that outage.

The Salem Unit 2 SEC system is special custom-made safeguard equipment which includes a control electronic unit (ceu). The function of the ceu is to respond to a safety injection (SI), blackout and voltage degradation or combination of all above signals. The SEC cabinet accepts and combines accident and undervoltage input signals to select the proper mode of operation. Based on these inputs the SEC provides the appropriate outputs for equipment loading. The system has a self-test feature, which continually tests each sequencing circuit and the continuity of the output relay coils. The entire self-test process takes less than five minutes to be completed. Upon completion, the process is started all over again. This self-testing process will continue as long as no problem has occurred in the affected SEC panels. If a problem is detected, the self-test will energize the local and control room alarm. When the alarm is received in the main control room, an operator will be dispatched to check the

affected SEC panel. This self-test feature alerts the operators to failures that could affect the operability of the SEC.

In addition to the self-test feature, a monthly functional test is performed on each SEC as an added assurance of operability.

Surveillance test results were reviewed for both Salem units. This review confirmed that the SECs are reliable.

The SEC manufacturer was contacted to determine if deferral of the surveillance requirement is acceptable. Based on the assurance provided by the automatic self-test feature, the manufacturer agreed that it is acceptable to defer the surveillance requirement.

Performance of the 18-month surveillance testing involves personnel accessing the panels and includes the lifting of leads. These activities involve the possibility of personnel error and/or inadvertent disturbance of the equipment that could result in unplanned actuation. Consideration of net safety gain made deferral of the surveillance requirement for a few weeks into the refueling outage preferable over performance of the activities an extra time during one of the maintenance outages. The surveillance can only be performed with the unit shutdown.

## **CONCLUSION**

Based on the above discussion, deferral of surveillance requirement 4.3.2.1.3 from 3/20/99 (the earliest SEC overdue date) to the 2R10 outage will not impact system availability or reliability.

### **4.8.2.3.2.f, (Electrical Power Systems, 125 Volt D.C. Distribution), and 4.8.2.5.2.c.2 and 4.8.2.5.2.d (Electrical Power Systems, 28 Volt D.C. Distribution)**

Completion of these surveillance requirements involve performance of 18 month battery service tests. Unit 2 has three 125 Volt batteries and two 28 Volt batteries. The surveillances for these batteries become overdue as follows: 2A 125 Volt Battery – 2/10/99; 2B 125 Volt Battery – 4/7/99; 2C 125 Volt Battery – 2/27/99; 2A 28 Volt Battery – 2/21/99; and 2B 28 Volt Battery – 3/3/99. This request asks that the requirement to perform the battery service tests be deferred to the 2R10 outage to be performed during the appropriate window during that outage.

Salem 28 Volt D.C. and 125 Volt D.C. systems testing complies with the testing requirement as specified in the IEEE 450-1975. Salem 28 Volt D.C. and 125 Volt D.C.

systems are/have been tested routinely on weekly, quarterly, 18 months and 60 months basis.

During the weekly test, the specific gravity, voltage and temperature of pilot cell and overall battery voltage are measured and logged. During the quarterly surveillance, the individual cell voltages and individual cell specific gravities are measured. Battery room ambient temperature acceptability and D. C. bus voltage is verified daily.

Weekly and quarterly data is monitored and trended by the system manager. Upon indication of any decline in cell voltage, specific gravity etc, appropriate action will be taken before the issue becomes critical.

As of the last performance of the 60 month battery tests the capacity factors for 28 Volt D.C. and 125 Volt D.C. batteries were all above 100%. The 18-month battery service tests for each battery were performed twice during the extended shutdown. A review of the results of the last performance tests and the service tests performed during the outage confirmed that the batteries still possess adequate capacity margin.

Decline in battery performance would occur slowly and would be detected under the weekly and or quarterly testing before the battery capacity could become critical.

Discussion with the battery manufacturer (C&D) indicates that other plants with similar C&D batteries have already completed several 24 month fuel cycles with no adverse consequences. Plant Vogtle has justified increasing the surveillance frequencies to 24 months.

During the performance of 125-Volt D.C. 18-month battery service testing the entire dc train will be tagged out resulting in the associated diesel generator being unable to start in the event of a loss of offsite power. These considerations support deferring the service tests to the refueling outage over performance of an extra service test during one of the maintenance outages.

## **CONCLUSION**

Based on the above discussion, deferral of surveillance requirements 4.8.2.3.2.f from 2/10/99 (the earliest 125 Volt D.C. 18 month battery service overdue date), and 4.8.2.5.2.c.2 and 4.8.2.5.2.d from 2/21/99 (the earliest 28 Volt D.C. 18 month battery service overdue date) to the 2R10 outage is prudent with the impact on battery performance and reliability being insignificant