PSE&G

Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

LRN-00-0127
LCR S00-03

MAY 1 5 2000

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

Gentlemen:

REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS
3/4.8.1 A.C. SOURCES
SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

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

The proposed TS changes contained herein modify the requirements to test the remaining diesel generators when (1) one of the two independent off-site power sources is inoperable as delineated in Section 3/4.8.1 Action a, and (2) a diesel generator is inoperable for other than preventative maintenance reasons as delineated in Section 3/4.8.1 Action b of the Technical Specifications.

These proposed changes are consistent with the recommendations contained in Generic Letter 93-05 "Line-Item Technical Specification Improvements To Reduce Surveillance For Testing During Power Operation" and the start reduction goals of Generic Letter 84-15 "Proposed Staff Actions To Improve and Maintain Diesel Generator Reliability." The elimination of unnecessary diesel generator starts is consistent with changes granted to H. B. Robinson (March 3, 1995), Turkey Point Units 3 and 4 (December 28,1995), and Indian Point Unit 3 (February 9, 1999).

The proposed change also (1) expands the diesel generator loading band for the monthly, six-month, and the two hour loaded pre-requisite for the Hot Restart test in accordance with the guidance of Regulatory Guide 1.9 "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants," Rev. 3, 1993, (2) corrects an administrative oversight.

A001

The proposed change has been evaluated in accordance with 10CFR50.91(a)(1), using the criteria in 10CFR50.92(c), and it has been determined that this request involves no significant hazards considerations.

PSE&G has reviewed the proposed License Amendment Request (LCR) against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, PSE&G concludes that the proposed change meets the criteria delineated in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement.

A description of the requested amendment, the reason for the changes, and the justification for the changes are provided in Attachment 1. The basis for no significant hazards consideration determination are provided in Attachment 2. The Technical Specification pages by the proposed changes are provided in Attachment 3.

To minimize the overall potential engine degradation resulting from wear and tear of testing of the diesel generators, PSE&G requests that this proposed amendment be approved by March 1, 2001. Upon NRC approval of the proposed change, PSE&G requests that the amendment be made effective upon issuance, but allow implementation period of sixty (60) days to provide sufficient time for associated administrative activities.

Should you have any questions regarding this request, please contact E. Villar at (856) 339-5456.

Sincerely,

M. B. Bezilla
Vice President - Operations

Affidavit
Attachments (3)

MAY 1 5 2000

C Mr. H. Miller, Administrator - Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. R. Fretz, Licensing Project Manager - Salem
U. S. Nuclear Regulatory Commission
One White Flint North
Mail Stop 4D3
11555 Rockville Pike
Rockville, MD 20852

USNRC Resident Inspector Office (X24)

Mr. K. Tosch, Manager IV
Bureau of Nuclear Engineering
P. O. Box 415
Trenton, NJ 08625

LRN-00-0127
LCR S00-03

STATE OF NEW JERSEY)
) SS.
COUNTY OF SALEM)

M. B. Bezilla, being duly sworn according to law deposes and says:

I am Vice President - Operations of Public Service Electric and Gas Company, and as such, I find the matters set forth in the above referenced letter, concerning Salem Generating Station, Units 1 and 2, are true to the best of my knowledge, information and belief.

Subscribed and Sworn to before me

this 15 day of May, 2000

Notary Public of New Jersey

My Commission expires on 12/8/2003

ATTACHMENT 1 LCR S00-03
LRN-00-0127

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

DESCRIPTION OF THE PROPOSED CHANGE

The proposed changes to the Technical Specificartion (TS) 3.8.1.1 Action Statements (AS) a, b, surveillance testing 4.8.1.1.2.a.2, 4.8.1.1.2.c, and 4.8.1.1.2.f are indicated below. The added phrases are shown in bold and underlined and those phrases that are being deleted are shown with a line through them.

A Proposed changes to (TS) 3.8.1.1 AS a

With an independent A.C. circuit of the above required A.C.electrical power sources inoperable, demonstrate the OPERABILITY of the remaining independent A.C. circuit by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; ~~and demonstrate OPERABILITY of three diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24 hours;~~ restore the inoperable independent A.C. circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

B Proposed changes to (TS) 3.8.1.1 AS b

"...With one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the independent A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. **Determine the two remaining OPERABLE diesel generators are not inoperable due to a common cause failure or perform Surveillance Requirement 4.8.1.1.2.a.2. within 24 hours**. If the diesel generator is inoperable for preventive maintenance, the two remaining OPERABLE diesel generators need not be tested **nor the OPERABILITY evaluated.** ~~If the diesel generator is inoperable for any reason other than preventive maintenance, demonstrate the OPERABILITY of the remaining diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24 hours~~. In any case, restore the inoperable diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

C Proposed changes to the emergency diesel generator (EDG) loading from 2500-2600 KW to 2330-2600 KW during Surveillance Testing 4.8.1.1.2. a. 2, 4.8.1.1.2.c, and 4.8.1.1.2.f.

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

4.8.1.1.2.a.2:

"...Subsequently, verifying the generator is synchronized with voltage maintained ≥ 3910 volts and ≤ 4580 volts, gradually loaded to ~~2500~~ **2330** - 2600 KW**, and operates at a load of ~~2500~~ **2330** - 2600 KW ** for greater than or equal to 60 minutes."

4.8.1.1.2.c

"...The generator shall be synchronized to its emergency bus with voltage maintained ≥ 3910 volts and ≤ 4580 volts, loaded to ~~2500~~ **2330** - 2600 KW** in less than or equal to 60 seconds, and operates at a load of ~~2500~~ **2330** - 2600 KW ** for at least 60 minutes."

4.8.1.1.2.f.

"...At least once per 18 months, the following test shall be performed within 5 minutes of the diesel shutdown after the diesel has operated for at least two hours at ~~2500~~ **2330** - 2600 KW **."

D Deletes surveillance 4.8.1.1.2.d.7 from the NOTE at the bottom of Technical Specifications 3.8.1.2 and replaces it with 4.8.1.1.2.g.

----------NOTE----------
The following surveillances are not required to be performed to maintain operability during Modes 5 and 6. These surveillances are: 4.8.1.1.1.b, 4.8.1.1.2.d.2, 4.8.1.1.2.d.3, 4.8.1.1.2.d.4, 4.8.1.1.2.d.6, ~~4.8.1.1.2.d.7~~, 4.8.1.1.2.d.9, 4.8.1.1.2.e, ~~and~~ 4.8.1.1.2.f**, and 4.8.1.1.2.g.**.

REASON FOR THE PROPOSED CHANGES

A & B Proposed changes to (TS) 3.8.1.1 AS a and b

The proposed changes will reduce testing of the diesel generator. The testing of the operable diesel generators imposes an unnecessary burden on the plant staff, but most importantly subjects the diesel generators to unnecessary operating wear and stress of starting challenges when it can be clearly evaluated that there is no common-cause failure.

C Proposed changes to the EDG loading from 2500-2600 KW to 2330-2600 KW during Surveillance Testing 4.8.1.1.2. a. 2, 4.8.1.1.2.c, and 4.8.1.1.2.f.

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

Currently, PSE&G uses portable/temporary Metering & Test Equipment (M&TE) every time a diesel generator TS surveillance is performed. This proposed change would eliminate the need for special test equipment for these surveillances and allow use of the local (permanently) installed wattmeters. Expanding the diesel generator-loading band will accommodate the +/- 69 KW inaccuracies of the installed meter. This will significantly reduce the operating and maintenance costs due to Operations and Maintenance burdens associated with connecting/disconnecting test equipment six times per month (i.e., six EDG's). This will also reduce (eliminate) the risk of aborting TS surveillance tests due to test equipment malfunctions or errors.

D Deletes surveillance 4.8.1.1.2.d.7 from Technical Specifications 3.8.1.2 and replaces it with 4.8.1.1.2.g.

The proposed change to the note in Technical Specifications 3.8.1.2 is a correction of an administrative oversight (renumbering of a surveillance requirement) and does not change the content or intent of the surveillance.

JUSTIFICATION FOR THE PROPOSED CHANGES

The standby ac power source for the Salem Units consists of three automatically starting EDGs per unit. Each diesel generator set supplies power to one 4160-V vital bus (A, B, and C) in the event of a loss of offsite power. Any two of the three diesel generators and their associated vital buses can supply sufficient power for operation of the required safeguard equipment for a design basis Loss Of Coolant Accident (LOCA) coincident with a loss of offsite power. The diesel generator units are located in the Auxiliary Building at Elevation 100 feet. Within the building the diesel-generators are isolated from each other and from other equipment in the area by firewalls and fire doors. An Automatic Fire Protection System is installed.

Elimination of unnecessary starts (challenges) to the diesel generators will result in increased equipment reliability, thus improving overall reliability for emergency onsite power supplies, as follows:

A) Reduce the overall engine degradation resulting from wear and tear of testing and reduce the probability of failure due to engine degradation, and,

B) Minimize the number of entries into an equipment configuration where a potential challenge to the safety function exists during the period of the tests.

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

Eliminating the testing of the diesel generators whenever a single off-site power source is inoperable does not establish operability of the remaining off-site power source. Operability is determined by the performance of surveillance 4.8.1.1.1.1.a. The normally performed monthly surveillance ensures the diesel will be available to perform their safety function.

The proposed change to TS 3.8.1.1 AS b will provide for the performance of an evaluation to demonstrate that the operable diesel generators are not potentially inoperable due to a common cause failure. If the evaluation concludes that the operable diesel generators are not potentially inoperable due to a common cause failure, the operable diesel generators will not have to be tested in accordance with 4.8.1.1.2.a.2. If the evaluation is inconclusive or demonstrates that they are susceptible to a potential common mode failure then it will be necessary to perform the appropriate Surveillance Requirement delineated in Section 4.8.1.1.2.a.2. within 24 hours.

In addition, PSE&G has implemented a formal program, as required by 10CFR50.65 "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants" (the Maintenance Rule), to monitor the significant parameters of the diesel generator systems in order to maintain the reliability of these systems. This program establishes performance goals and produces system status reports, which can be used as a tool to evaluate occasions of system inoperability and determine if there is a potential issue of common mode failure.

These proposed changes to eliminate unnecessary diesel generator starts from the inoperability of one off-site power source or a redundant diesel generator are consistent with the recommendations contained in Generic Letter 93-05 "Line-Item Technical Specification Improvements To Reduce Surveillance For Testing During Power Operation" and the start reduction goals of Generic Letter 84-15 "Proposed Staff Actions To Improve and Maintain Diesel Generator Reliability."

This portion of the proposed change, elimination of unnecessary starts, is consistent with changes granted to H. B. Robinson (March 3, 1995), Turkey Point Units 3 and 4 (December 28,1995), and Indian Point Unit 3 (February 9, 1999).

The nameplate continuous rating of the diesel generator units is 2600 kW, 900 rpm, 4160-V, 3 phase, 60 cycles. The units are sized to handle the loads necessary for a design basis LOCA coincident with the loss of all offsite power. The diesel generators are designed to be ready to accept load within 10 seconds after receipt of a signal to start.

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

Expanding the diesel-loading band from 2500-2600 KW to 2330-2600 KW is justified as described below.

The purpose of the one-hour surveillance is to verify the diesel starting capability and readiness to accept load; not to verify the endurance limits of the diesel generators. Loading levels of the diesel generators are verified during the performance of the 24-hour endurance run. Since the loading criteria for the 24 hour endurance test is not being changed, changing the loading level at the one hour surveillance test will not impact current verification of the diesel's ability to sustain the level of loading for a continued period of time.

Regulatory Guide (Reg. Guide) 1.9, Rev. 3, Section 2.3.2.1 "Monthly Testing" prescribes how the diesel generator should be started and loaded. Specifically, Section 2.2.2 "Load-Run Test" stipulates the loading condition for the monthly surveillance load-run test allows the loading of 90% to 100% of the continuous rating of the EDG for an interval for not less than one hour. Therefore, loading of the EDG at a minimum of 90% is acceptable for the one-hour surveillance test.

Any engine malfunction is not expected to be influenced by 10% of the variation of the engine loading within the rating limit that has been endorsed by the manufacturer. Therefore, lowering the minimum-loading limit during the surveillance test to approximately 90% (2330 KW) is judged acceptable. The acceptance criteria for the test continue to be the stabilization of the voltage and frequency within the prescribed acceptable limits. Since there is no change in the engine rating as endorsed by the manufacturer, the revised minimum loading limit for the monthly surveillance test also will not impact current maintenance interval required for the engine.

In addition, all parameters monitoring the condition of the running engine are expected to stabilize within the one hour of testing. Any malfunction of the engine or its supporting systems will immediately be indicated in abnormal display of such parameters shortly after the diesel starting, such as rapid rise of lube oil/jacket water temperature, fluid leakage, vibration, governor, and fuel delivery malfunction. Therefore, loading of the EDG at a minimum of 90% is acceptable for the one-hour surveillance test.

Amendment 229 and 210 to the Salem TS eliminated the requirement to perform the 24-hour endurance run during shutdown conditions, by deleting SR 4.8.1.1.2.d.7 and relocating its requirements into a new SR 4.8.1.1.2.g, which allowed this test to be conducted at power. However due to an administrative oversight, a note at the bottom of TS 3.8.1.2 "Electrical Power Systems – Shutdown" was not revised. The note exempts a number of surveillances from

having to be performed in Modes 5 and 6 to determine diesel operability, including SR 4.8.1.1.2.d.7. The note should have been revised to delete the reference to 4.8.1.1.2.d.7 and to incorporate the new SR 4.8.1.1.2.g. This change is considered administrative in nature.

CONCLUSIONS

The proposed change will reduce the burden associated with the unnecessary testing of the diesel generators, but more significantly will minimize unnecessary operating wear and stress and starting challenges of the diesel generators, while still protecting the health and safety of the public and station personnel.

ATTACHMENT 2 LCR S00-03
LRN-00-0127

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION - 10CFR50.92 EVALUATION

Pursuant to 10CFR50.92, PSE&G reviewed the proposed revision to determine whether the request involves a significant hazards consideration. PSE&G has determined that operation of Salem Generating Station, Unit Nos. 1 and 2, in accordance with the proposed changes does not involve a significant hazards consideration.

REQUESTED CHANGE

The proposed changes to the Technical Specifications (TS) 3.8.1.1 Action Statements (AS) a, b and surveillance testing 4.8.1.1.2.a.2, 4.8.1.1.2.c, and 4.8.1.1.2.f are indicated below. The added phrases are shown in bold and underlined and those phrases that are being deleted are shown with a line through them.

A Proposed changes to (TS) 3.8.1.1 AS a

With an independent A.C. circuit of the above required A.C.electrical power sources inoperable, demonstrate the OPERABILITY of the remaining independent A.C. circuit by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; ~~and demonstrate OPERABILITY of three diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24 hours;~~ restore the inoperable independent A.C. circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

B Proposed changes to (TS) 3.8.1.1 AS b

"...With one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the independent A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. **Determine the two remaining OPERABLE diesel generators are not inoperable due to a common cause failure or perform Surveillance Requirement 4.8.1.1.2.a.2. within 24 hours**. If the diesel generator is inoperable for preventive maintenance, the two remaining OPERABLE diesel generators need not be tested **nor the OPERABILITY evaluated.** ~~If the diesel generator is inoperable for any reason other than preventive maintenance, demonstrate the OPERABILITY of the remaining diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24~~

**SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS**

~~hours~~. In any case, restore the inoperable diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

C Proposed changes to the EDG loading from 2500-2600 KW to 2330-2600 KW during Surveillance Testing 4.8.1.1.2. a. 2, 4.8.1.1.2.c, and 4.8.1.1.2.f.

4.8.1.1.2.a.2:

"...Subsequently, verifying the generator is synchronized with voltage maintained ≥ 3910 volts and ≤ 4580 volts, gradually loaded to ~~2500~~ **2330** - 2600 KW**, and operates at a load of ~~2500~~ **2330** - 2600 KW ** for greater than or equal to 60 minutes."

4.8.1.1.2.c

"...The generator shall be synchronized to its emergency bus with voltage maintained ≥ 3910 volts and ≤ 4580 volts, loaded to ~~2500~~ **2330** - 2600 KW** in less than or equal to 60 seconds, and operates at a load of ~~2500~~ **2330** - 2600 KW ** for at least 60 minutes."

4.8.1.1.2.f.

"...At least once per 18 months, the following test shall be performed within 5 minutes of the diesel shutdown after the diesel has operated for at least two hours at ~~2500~~ **2330** - 2600 KW **."

D Deletes surveillance 4.8.1.1.2.d.7 from the NOTE at the bottom of Technical Specifications 3.8.1.2 and replaces it with 4.8.1.1.2.g.

----------NOTE----------
The following surveillances are not required to be performed to maintain operability during Modes 5 and 6. These surveillances are: 4.8.1.1.1.b, 4.8.1.1.2.d.2, 4.8.1.1.2.d.3, 4.8.1.1.2.d.4, 4.8.1.1.2.d.6, ~~4.8.1.1.2.d.7~~, 4.8.1.1.2.d.9, 4.8.1.1.2.e, ~~and~~ 4.8.1.1.2.f**, and 4.8.1.1.2.g.**.

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

BASIS

1. ***Will not involve a significant increase in the probability or consequences of an accident previously evaluated.***

The emergency diesel generator system is not an accident initiator. Eliminating the requirement to demonstrate that the operable diesel generators function properly, when there is no evidence that the inoperability of the affected diesel generator is the result of a potential common mode failure, will not increase the probability or the consequences of previously evaluated accidents, which rely upon emergency power supplies.
Eliminating the testing of the diesel generators whenever a single off-site power source is inoperable does not establish operability of the remaining off-site power source. Operability is determined by the performance of surveillance 4.8.1.1.1.1.a.

Elimination of unnecessary starts (challenges) to the diesel generators will result in increased equipment reliability and hence improved overall reliability for emergency onsite power supplies, as follows:

A) Reduce the overall engine degradation resulting from wear and tear of testing and reduce the probability of failure due to engine degradation, and,
B) Minimize the number of entries into an equipment configuration where a potential challenge to the safety function exists during the period of the tests.

Expanding the band from 2500-2600 KW to 2330-2600 KW to accommodate instrument inaccuracy does not change any design parameter. The diesel generator will still be fully loaded (90% to 100% of continuous rating) in accordance with Reg. Guide 1.9, Rev. 3, Section 2.2.2. The full capability of the diesel generator to carry its load will continue to be demonstrated during the 24 endurance run, which is unaffected by this request.

The proposed change to the note in TS 3.8.1.2 is a correction of an administrative oversight (renumbering of a surveillance requirement) and does not change the surveillance content or intent.

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

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

2. ***Does not create the possibility of a new or different kind of accident from any accident previously analyzed.***

Eliminating the requirement to demonstrate that the operable diesel generators function properly affects testing requirements only and does not alter the physical configuration of the plant, replace or modify existing equipment, affect operating practices or create any new or different accident precursors.

Similarly, expanding the band from 2500-2600 KW to 2330-2600 KW to accommodate instrument inaccuracy does not change the manner in which the diesel generator is operated, or introduces any new or different failure from any previously evaluated.

The proposed change to the note in TS 3.8.1.2 is a correction of an administrative oversight (renumbering of a surveillance requirement) and does not change the surveillance content or intent.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously analyzed.

3. ***Does not involve a significant reduction in a margin of safety.***

Eliminating the testing of the diesel generators whenever a single off-site power source is inoperable does not establish operability of the remaining off-site power source. Operability of the remaining off-site power source is determined by the performance of surveillance 4.8.1.1.1.1.a. The normally performed monthly surveillance ensures the diesel will be available to perform their safety function.

Eliminating the requirement to demonstrate that the operable diesel generators function properly, when there is no evidence that the inoperability of the affected diesel generator is the result of a potential common mode failure, does not reduce the margin of safety. If the evaluation is inconclusive or determines that a cause of inoperability for a diesel generator is a potential common mode failure then operability testing will be conducted for the remaining operable diesels. This action will assure that the initial assumption of two independent power supplies, utilized in the accident analysis, remain valid.

The proposed changes do not adversely affect the ability of the diesels to operate when called upon. Rather, these changes should result in improved overall reliability of the diesels and therefore the margin of safety is preserved for those events in which there is a dependence upon on-site AC power supplies.

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

Expanding the band from 2500-2600 KW to 2330-2600 KW to accommodate instrument inaccuracy does not introduce any new or different failure from any previously evaluated or changes the manner in which the diesel generator is operated. Expanding the band does not change any instrumentation set point, or changes to the auto loading sequence of the diesel. The capability of the diesel to be loaded to its manufactured maximum ratings will continue to be demonstrated during the performance of the diesel endurance run, which is unaffected by this request.

The proposed change to the note in TS 3.8.1.2 is a correction of an administrative oversight (renumbering of a surveillance requirement) and does not change the surveillance content or intent.

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

CONCLUSION

Based on the preceding discussion, PSE&G has concluded that the proposed changes to the Technical Specifications do not involve a significant hazards consideration.

SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS

The following Inserts should be incorporated on the attached marked up pages.

INSERT A

"Determine the two remaining OPERABLE diesel generators are not inoperable due to a common cause failure or perform Surveillance Requirement 4.8.1.1.2.a.2."

INSERT B

"nor the OPERABILITY evaluated"

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

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

Technical Specification	Page
3.8.1.1	3/4 8-1
4.8.1.1.2.a.2	3/4 8-3
4.8.1.1.2.c	3/4 8-3
4.8.1.1.2.f	3/4 8-5
3.8.1.2	3/4 8-5c

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

Technical Specification	Page
3.8.1.1	3/4 8-1
4.8.1.1.2.a.2	3/4 8-3
4.8.1.1.2.c	3/4 8-3
4.8.1.1.2.f	3/4 8-5
3.8.1.2	3/4 8-7a

ATTACHMENT 3
LRN-00-0127

LCR-S00-03

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent A.C. circuits between the offsite transmission network and the onsite Class 1E distribution system (vital bus system), and

b. Three separate and independent diesel generators with:

1. Separate day tanks containing a minimum volume of 130 gallons of fuel, and

2. A common fuel storage system consisting of two storage tanks, each containing a minimum volume of 23,000 gallons of fuel, and two fuel transfer pumps.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With an independent A.C. circuit of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining independent A.C. circuit by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and demonstrate OPERABILITY of three diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24 hours; restore the inoperable independent A.C. circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the independent A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the diesel generator is inoperable for preventive maintenance, the two remaining OPERABLE diesel generators need not be tested. If the diesel generator is inoperable for any reason other than preventive maintenance, demonstrate the OPERABILITY of the remaining diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24 hours. In any case, restore the inoperable diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

INSERT A

INSERT B

ATTACHMENT 3
LRW-00-0127

LCR S00-03

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Two physically independent A.C. circuits between the offsite transmission network and the onsite Class 1E distribution system (vital bus system) shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, power availability, and

b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring (manually and automatically) vital bus supply from one 13/4 kv transformer to the other 13/4 kv transformer.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in its day tank.

2. Verifying the diesel generator starts from standby conditions* and achieves ≥ 3910 volts and ≥ 58.8 Hz in ≤ 13 seconds, and subsequently achieves steady state voltage of ≥ 3910 and ≤ 4400 volts and frequency of 60 ± 1.2 Hz.

Subsequently, verifying the generator is synchronized with voltage maintained ≥ 3910 and ≤ 4580 volts, gradually loaded to ~~2500~~-2600 kw**, and operates at a load of ~~2500~~-2600 kw for greater than or equal to 60 minutes.

3. Verifying the diesel generator is aligned to provide standby power to the associated vital bus.

b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day tanks.

c. At least once per 6 months by verifying the diesel generator starts from standby conditions* and achieves ≥ 3910 volts and ≥ 58.8 Hz in ≤ 13 seconds, and subsequently achieves steady state voltage of ≥ 3910 and ≤ 4400 volts and frequency of 60 ± 1.2 Hz.

The generator shall be synchronized to its emergency bus with voltage maintained ≥ 3910 and ≤ 4580 volts, loaded to ~~2500~~-2600** kw in less than or equal to 60 seconds, and operate at a load of ~~2500~~-2600 kw for at least 60 minutes.

This test, if it is performed so it coincides with the testing required by Surveillance Requirement 4.8.1.1.2.a.2, may also serve to concurrently meet those requirements.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

c) Verifying that all nonessential automatic diesel generator trips (i.e., other than engine overspeed, lube oil pressure low, 4 KV Bus differential and generator differential) are automatically bypassed upon loss of voltage on the vital bus concurrent with a safety injection actuation signal.

7. Deleted

8. Verifying that the auto-connected loads to each diesel generator do not exceed the two hour rating of 2860 kw.

9. Verifying that with the diesel generator operating in a test mode (connected to its bus), a simulated safety injection signal overrides the test mode by (1) returning the diesel generator to standby operation and (2) automatically energizing the emergency loads with offsite power.

e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting all diesel generators simultaneously*, during shutdown, and verifying that all diesel generators accelerate to at least 58.8 Hz in less than or equal to 13 seconds.

f. At least once per 18 months, the following test shall be performed within 5 minutes of diesel shutdown after the diesel has operated for at least two hours at ~~2500~~ 2330-2600 kw**:

Verifying the diesel generator starts and achieves ≥ 3910 volts and ≥ 58.8 Hz in ≤ 13 seconds, and subsequently achieves steady state voltage of ≥ 3910 and ≤ 4400 volts and frequency of 60 ± 1.2 Hz.

g. At least once per 18 months verifying the diesel generator operates for at least 24 hours*. During the first 2 hours of this test, the diesel generators shall be loaded to 2760-2860 Kw**. During the remaining 22 hours of this test, the diesel generator shall be loaded to 2500-2600 Kw**. The steady state voltage and frequency shall be maintained at ≥ 3910 and ≤ 4580 volts and 60 ± 1.2 Hz during this test.

4.8.1.1.3 The diesel fuel oil storage and transfer system shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying the level in each of the above required fuel storage tanks.

2. Verifying that both fuel transfer pumps can be started and transfer fuel from the fuel storage tanks to the day tanks.

ATTACHMENT 3
LRN-00-0127

LCR-S00-03

ELECTRICAL POWER SYSTEMS

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system (vital bus system), and

b. Two separate and independent diesel generators with:

1. Separate day tanks containing a minimum volume of 130 gallons of fuel, and

2. A common fuel storage system containing a minimum volume of 23,000 gallons of fuel, and

3. A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until the minimum required A.C. electrical power sources are restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

NOTE

The following surveillances are not required to be performed to maintain operability during Modes 5 and 6. These surveillances are: 4.8.1.1.1.b, 4.8.1.1.2.d.2, 4.8.1.1.2.d.3, 4.8.1.1.2.d.4, 4.8.1.1.2.d.6, ~~4.8.1.1.2.d.7,~~ 4.8.1.1.2.d.9, 4.8.1.1.2.e, ~~and~~ 4.8.1.1.2.f, and 4.8.1.1.2g.

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.8.1.1.1, 4.8.1.1.2, 4.8.1.1.3 (except for requirement 4.8.1.1.3.a.2) and 4.8.1.1.4.

ATTACHMENT 3
LRN-00-0127

LCR S00-03

3/4.8 ELECTRICAL POWER SYSTEMS

4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent A.C. circuits between the offsite transmission network and the onsite Class 1E distribution system (vital bus system), and

b. Three separate and independent diesel generators with:

1. Separate day tanks containing a minimum volume of 130 gallons of fuel, and

2. A common fuel storage system consisting of two storage tanks, each containing a minimum volume of 23,000 gallons of fuel, and two fuel transfer pumps.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With an independent A.C. circuit of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining independent A.C. circuit by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and demonstrate OPERABILITY of three diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24 hours; restore the inoperable independent A.C. circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the independent A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the diesel generator is inoperable for preventive maintenance, the two remaining OPERABLE diesel generators need not be tested. If the diesel generator is inoperable for any reason other than preventive maintenance, demonstrate the OPERABILITY of the remaining diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2 within 24 hours. In any case, restore the inoperable diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

INSERT A

INSERT B

ATTACHMENT 3
LRN-00-0127

LCR-S00-03

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Two physically independent A.C. circuits between the offsite transmission network and the onsite Class 1E distribution system (vital bus system) shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, power availability, and

b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring (manually and automatically) vital bus supply from one 13/4 kv transformer to the other 13/4 kv transformer.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in its day tank.

2. Verifying the diesel generator starts from standby conditions* and achieves ≥ 3910 volts and ≥ 58.8 Hz in ≤ 13 seconds, and subsequently achieves steady state voltage of ≥ 3910 and ≤ 4400 volts and frequency of 60 ± 1.2 Hz.

Subsequently, verifying the generator is synchronized with voltage maintained ≥ 3910 and ≤ 4580 volts, gradually loaded to ~~2500~~-2600 kw**, and operates at a load of ~~2500~~-2600 kw for greater than or equal to 60 minutes. 2330

3. Verifying the diesel generator is aligned to provide standby power to the associated vital bus.

b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to one hour by checking for and removing accumulated water from the day tanks.

c. At least once per 6 months by verifying the diesel generator starts from standby conditions* and achieves ≥ 3910 volts and ≥ 58.8 Hz in ≤ 13 seconds, and subsequently achieves steady state voltage of ≥ 3910 and ≤ 4400 volts and frequency of 60 ± 1.2 Hz.

The generator shall be synchronized to its emergency bus with voltage maintained ≥ 3910 and ≤ 4580 volts, loaded to ~~2500~~-2600** kw in less than or equal to 60 seconds, and operate at a load of ~~2500~~-2600 kw for at least 60 minutes. 2330

This test, if it is performed so it coincides with the testing required by Surveillance Requirement 4.8.1.1.2.a.2, may also serve to concurrently meet those requirements.

SURVEILLANCE REQUIREMENTS (Continued)

c) Verifying that all nonessential automatic diesel generator trips (i.e., other than engine overspeed, lube oil pressure low, 4 KV bus differential and generator differential), are automatically bypassed upon loss of voltage on the vital bus concurrent with a safety injection actuation signal.

7. Deleted

8. Verifying that the auto-connected loads to each diesel generator do not exceed the two hour rating of 2860 kw.

9. Verifying that with the diesel generator operating in a test mode (connected to its bus), a simulated safety injection signal overrides the test mode by (1) returning the diesel generator to standby operation and (2) automatically energizing the emergency loads with offsite power.

e. At least once per ten years or after any modifications which could affect diesel generator interdependence by starting all diesel generators simultaneously*, during shutdown, and verifying that all diesel generators accelerate to at least 58.8 Hz in less than or equal to 13 seconds.

f. At least once per 18 months, the following test shall be performed within 5 minutes of diesel shutdown after the diesel has operated for at least two hours at ~~2500~~ 2330-2600 kw**:

Verifying the diesel generator starts and achieves $\geq$ 3910 volts and $\geq$ 58.8 Hz in $\leq$ 13 seconds, and subsequently achieves steady state voltage of $\geq$ 3910 and $\leq$ 4400 volts and frequency of 60 ± 1.2 Hz.

g. At least once per 18 months verifying the diesel generator operates for at least 24 hours*. During the first 2 hours of this test, the diesel generators shall be loaded to 2760-2860 Kw**. During the remaining 22 hours of this test, the diesel generator shall be loaded to 2500-2600 Kw**. The steady state voltage and frequency shall be maintained at $\geq$ 3910 and $\leq$ 4580 volts and 60 ± 1.2 Hz during this test.

4.8.1.1.3 The diesel fuel oil storage and transfer system shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying the level in each of the above required fuel storage tanks.

2. Verifying that both fuel transfer pumps can be started and transfer fuel from the fuel storage tanks to the day tanks.

ELECTRICAL POWER SYSTEMS

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system (vital bus system), and

b. Two separate and independent diesel generators with:

1. Separate day tanks containing a minimum volume of 130 gallons of fuel, and

2. A common fuel storage system containing a minimum volume of 23,000 gallons of fuel, and

3. A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until the minimum required A.C. electrical power sources are restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

NOTE

The following surveillances are not required to be performed to maintain operability during Modes 5 and 6. These surveillances are: 4.8.1.1.1.b, 4.8.1.1.2.d.2, 4.8.1.1.2.d.3, 4.8.1.1.2.d.4, 4.8.1.1.2.d.6, ~~4.8.1.1.2.d.7,~~ 4.8.1.1.2.d.9, 4.8.1.1.2.e, ~~and~~ 4.8.1.1.2.f, and 4.8.1.1.2.g.

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.8.1.1.1, 4.8.1.1.2, 4.8.1.1.3 (except for requirement 4.8.1.1.3.a.2) and 4.8.1.1.4.