PSEG Nuclear LLC
P.O. Box 236, Hancocks Bridge, New Jersey 08038-0236

JUN 0 7 2006

PSEG Nuclear LLC

LR-N06-0201
LCR S06-05

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

REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS TO ELIMINATE REQUIREMENTS FOR HYDROGEN RECOMBINERS AND HYDROGEN ANALYZERS USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS
SALEM GENERATING STATION - UNIT 1 AND UNIT 2
DOCKET NO. 50-272 AND 50-311
FACILITY OPERATING LICENSE NO. DPR-70 AND DPR-75

In accordance with the provisions of 10 CFR 50.90, PSEG Nuclear, LLC (PSEG) hereby transmits a request for amendment of the Technical Specifications (TS) for Salem Generating Station Unit 1 and Unit 2.

The proposed amendment will delete the TS requirements related to hydrogen recombiners and hydrogen analyzers. The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on October 16, 2003. The changes are consistent with Revision 1 of NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the *Federal Register* on September 25, 2003, as part of the Consolidated Line Item Improvement Process (CLIIP).

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability and plant-specific verifications. Attachment 2 provides the existing TS pages marked up to show the proposed changes. Attachment 3 summarizes the regulatory commitments made in this submittal and Attachment 4 provides the existing TS Bases pages marked up to show the proposed changes.

A001

PSEG does not have specific schedule needs for this proposed change and processing can be pursued in accordance with the normal NRC review schedule for this type of request. PSEG requests implementation within 60 days of receipt of the approved amendment.

Should you have any questions regarding this request, please contact Mr. Jamie Mallon at (610) 765-5507.

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

Executed on 6/7/06
(Date)

Sincerely,

Thomas P. Joyce
Site Vice President
Salem Generating Station

Attachments (4)

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

U. S. Nuclear Regulatory Commission
Mr. Stewart Bailey, Project Manager – Salem Unit 1 and Unit 2
Mail Stop 08B1
Washington, DC 20555-0001

USNRC Senior Resident Inspector – Salem Unit 1 and Unit 2 (X24)

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

ATTACHMENT 1
LR-N06-0201

LCR S06-05

SALEM GENERATING STATION - UNIT 1 AND UNIT 2
DOCKET NO. 50-272 AND 50-311
FACILITY OPERATING LICENSE NO. DPR-70 AND DPR-75

ELIMINATION OF REQUIREMENTS FOR HYDROGEN RECOMBINERS AND HYDROGEN ANALYZERS

Table of Contents

CHANGE TO TECHNICAL SPECIFICATIONS

1.0 INTRODUCTION

The proposed License amendment deletes Technical Specification (TS) 3/4.6.4, "Combustible Gas Control," including TS 3/4.6.4.1, "Hydrogen Analyzers," and TS 3/4.6.4.2, "Electric Hydrogen Recombiners." The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on October 16, 2003.

The changes are consistent with Revision 1 of NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the Federal Register on September 25, 2003, as part of the Consolidated Line Item Improvement Process (CLIIP). Salem Unit 1 and Unit 2 have not adopted STS; however, NRC Regulatory Issue Summary 2000-06, "CLIIP for Adopting STS Changes for Power Reactors," permits adoption of CLIIP changes for Licensees that have not converted to STS, but have determined that the TSTF is applicable to their facility.

2.0 DESCRIPTION

Consistent with the NRC-approved Revision 1 of TSTF-447, the proposed TS changes include:

TS 3/4.6.4	Combustible Gas Control	Deleted
TS 3/4.6.4.1	Hydrogen Analyzers	Deleted
TS 3/4.6.4.2	Electric Hydrogen Recombiners - W	Deleted

The elimination of the TS requirements above result in deletion of TS Bases 3/4.6.4, "Combustible Gas Control."

3.0 BACKGROUND

The background for this application is adequately addressed by the NRC Notice of Availability published on September 25, 2003, (68 FR 55416), Revision 1 to TSTF-447, and the documentation associated with the 10 CFR 50.44 rulemaking.

4.0 REGULATORY REQUIREMENTS AND GUIDANCE

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the NRC Notice of Availability published on September 25, 2003, (68 FR 55416), Revision 1 to TSTF-447, and the documentation associated with the 10 CFR 50.44 rulemaking.

5.0 TECHNICAL ANALYSIS

PSEG has reviewed the model safety evaluation (SE) published on September 25, 2003 (68 FR 55416), and verified its applicability as part of the CLIIP. This verification included a review of the NRC staff's model SE, as well as the information provided to support Revision 1 to TSTF-447.

PSEG has concluded that the justifications presented in the TSTF proposal and the model SE prepared by the NRC staff are applicable to Salem Unit 1 and Unit 2 and justify this amendment for the incorporation of the changes to the Salem Unit 1 and Unit 2 TS.

6.0 REGULATORY ANALYSIS

A description of this proposed change and its relationship to applicable regulatory requirements and guidance was provided in the NRC Notice of Availability published on September 25, 2003, (68 FR 55416), Revision 1 to TSTF-447, and the documentation associated with the 10 CFR 50.44 rulemaking.

As discussed in the model SE published in the Federal Register on September 25, 2003, (68 FR 55416) for this TS improvement, PSEG is making the following plant-specific verifications and commitments.

6.1 Hydrogen Monitoring

PSEG has verified that a hydrogen monitoring system capable of diagnosing beyond design-basis accidents is installed in Salem Unit 1 and Unit 2. PSEG is making a regulatory commitment to maintain this capability. The hydrogen monitoring function will be included in the Salem Updated Final Safety Analysis Report. This regulatory commitment will be implemented in conjunction with the implementation of the proposed TS revision.

6.2 Inerted Containment

Salem Unit 1 and Unit 2 do not have an inerted containment. Therefore, the need to verify and commit to oxygen monitors is not applicable for PSEG.

7.0 NO SIGNIFICANT HAZARDS CONSIDERATION

PSEG has reviewed the proposed no significant hazards consideration determination published on September 25, 2003 (68 FR 55416) as part of the CLIIP. PSEG has concluded that the proposed determination presented in the notice is applicable to Salem Unit 1 and Unit 2, and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

8.0 ENVIRONMENTAL EVALUATION

PSEG has reviewed the environmental evaluation included in the model SE published on September 25, 2003 (68 FR 55416) as part of the CLIIP. PSEG has concluded that the NRC staff's findings presented in that evaluation are applicable to Salem Unit 1 and Unit 2 and the evaluation is hereby incorporated by reference for this application.

9.0 PRECEDENT

This application is being made in accordance with the CLIIP. PSEG is not proposing variations or deviations from the TS changes described in Revision 1 to TSTF-447 or the NRC staff's model SE published on September 25, 2003 (68 FR 55416).

10.0 REFERENCES

Federal Register Notice: Notice of Availability of Model Application Concerning Technical Specification Improvement To Eliminate Hydrogen Recombiner Requirement, and Relax the Hydrogen and Oxygen Monitor Requirements for Light Water Reactors Using the Consolidated Line Item Improvement Process, published September 25, 2003, (68 FR 55416).

ATTACHMENT 2 LCR S06-05
LR-N06-0201

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

Salem Unit 1 Affected Page List

Index Page VI
Index Page XIII
3/4 6-14 through 17

The following Technical Specifications for Salem Unit 1 Facility Operating License DPR-70 are affected by this change request:

Technical Specification	Page
3/4.6.4, "Combustible Gas Control"	3/4 6-18
3/4.6.4.1, "Hydrogen Analyzers"	3/4 6-18
3/4.6.4.2, "Electric Hydrogen Recombiners – W"	3/4 6-19

Salem Unit 2 Affected Page List

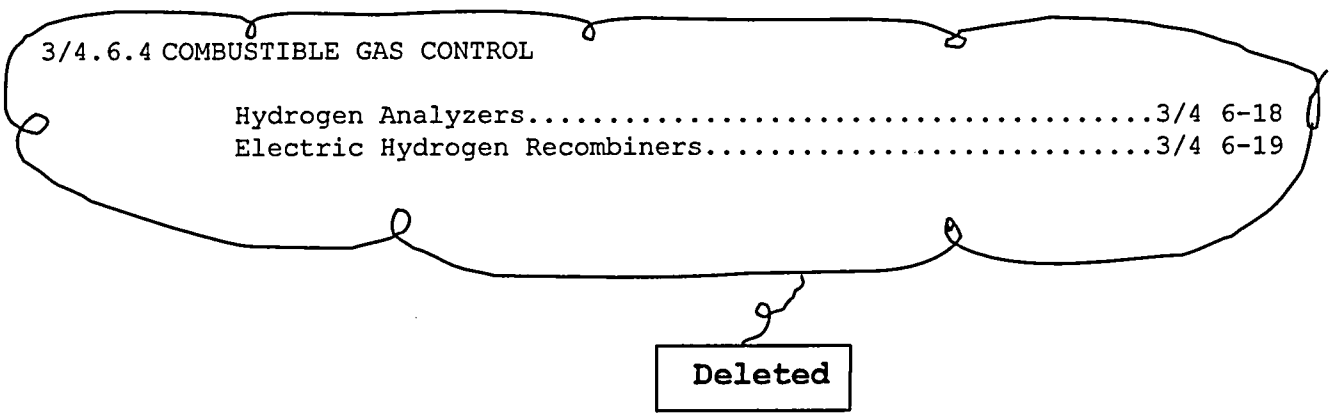
Index Page VI
Index Page XIII
3/4 6-16 through 19
3/4 6-20

The following Technical Specifications for Salem Unit 2 Facility Operating License DPR-75 are affected by this change request:

Technical Specification	Page
3/4.6.4, "Combustible Gas Control"	3/4 6-21
3/4.6.4.1, "Hydrogen Analyzers"	3/4 6-21
3/4.6.4.2, "Electric Hydrogen Recombiners – W"	3/4 6-22

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS



INDEX

BASES

Deleted

19

PAGES 3/4 6-14 THROUGH 3/4 6-17 ARE INTENTIONALLY LEFT BLANK

19

CONTAINMENT SYSTEMS

This Page Deleted

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 Two independent containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

With both hydrogen analyzers inoperable, restore at least one analyzer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each hydrogen analyzer shall be demonstrated OPERABLE by the performance of:

a. a CHANNEL CHECK at least once per 12 hours;

b. a CHANNEL FUNCTIONAL TEST at least once per 92 days;

c. a gas calibration* at least once per 92 days using sample gases containing:

   1. Two volume percent hydrogen (low span), balance Nitrogen, and
   2. Six volume percent hydrogen (high span), balance Nitrogen.

d. a CHANNEL CALIBRATION at least once per refueling using sample gases containing:

   1. Two volume percent hydrogen (low span), balance Nitrogen, and
   2. Six volume percent hydrogen (high span), balance Nitrogen.

* The hydrogen sensor gas calibration shall consist of all elements of the CHANNEL CALIBRATION, with the exception that only a single point comparison check for reasonableness (by comparison to other installed plant instrumentation) is required to check the hydrogen analyzer temperature and pressure sensors.

CONTAINMENT SYSTEMS

ELECTRIC HYDROGEN RECOMBINERS - W

This Page Deleted

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two independent containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 6* months by verifying during a recombiner system functional test that the minimum heater sheath temperature increases to ≥ 700°F within 90 minutes and (upon reaching 700°F) verifying that, after increasing the power setting to maximum power for 2 minutes, the power meter reads ≥ 60 kW.

b. At least once per 18 months by:

1. Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits.

2. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosures (i.e., loose wiring or structural connections, deposits of foreign materials, etc.)

3. Verifying during a recombiner system functional test that the heater sheath temperature increases to ≥ 1200°F within 5 hours and is maintained for at least 4 hours.

4. Verifying the integrity of all heater electrical circuits by performing a continuity and resistance to ground test following the above required function test. The resistance to ground for any heater phase shall be ≥ 10,000 ohms.

* NOTE: The requirements of this 6 month system functional test can be met by satisfactory completion of the 18 month system functional test in Specification 4.6.4.2.b on those occasions where performance of both tests would be required at or near the same time.

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

Deleted

INDEX

BASES

Deleted

22

PAGES 3/4 6-16 THROUGH 3/4 6-19 ARE INTENTIONALLY BLANK.

PAGE INTENTIONALLY BLANK

THIS PAGE INTENTIONALLY LEFT BLANK

This Page Deleted

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 Two independent containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

With both hydrogen analyzers inoperable, restore at least one analyzer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each hydrogen analyzer shall be demonstrated OPERABLE by the performance of:

a. a CHANNEL CHECK at least once per 12 hours;

b. a CHANNEL FUNCTIONAL TEST at least once per 92 days;

c. a gas calibration* at least once per 92 days using sample gases containing:

   1. Two volume percent hydrogen (low span), balance Nitrogen, and
   2. Six volume percent hydrogen (high span), balance Nitrogen.

d. a CHANNEL CALIBRATION at least once per refueling using sample gases containing:

   1. Two volume percent hydrogen (low span), balance Nitrogen, and
   2. Six volume percent hydrogen (high span), balance Nitrogen.

* The hydrogen sensor gas calibration shall consist of all elements of the CHANNEL CALIBRATION, with the exception that only a single point comparison check for reasonableness (by comparison to other installed plant instrumentation) is required to check the hydrogen analyzer temperature and pressure sensors.

This Page Deleted

CONTAINMENT SYSTEMS

ELECTRIC HYDROGEN RECOMBINERS - W

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two independent containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 6* months by verifying during a recombiner system functional test that the minimum heater sheath temperature increases to $\geq$ 700°F within 90 minutes and (upon reaching 700°F) verifying that, after increasing the power setting to maximum power for 2 minutes, the power meter reads $\geq$ 60 kW.

b. At least once per 18 months by:

1. Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits.

2. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosures (i.e., loose wiring or structural connections, deposits of foreign materials, etc.)

3. Verifying, during a recombiner system functional test, that the heater sheath temperature increases to $\geq$ 1200°F within 5 hours and is maintained for at least 4 hours.

4. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 10,000 ohms.

* NOTE: The requirements of this 6 month system functional test can be met by satisfactory completion of the 18 month system functional test in Specification 4.6.4.2.b on those occasions where performance of both tests would be required at or near the same time.

ATTACHMENT 3
LR-N06-0201

LCR S06-05

LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by PSEG in this document. Any other statements in this submittal are provided for information only purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Jamie Mallon at (610) 765-5507.

Regulatory Commitment	Due Date/Event
PSEG will maintain the hydrogen monitoring system capability of diagnosing beyond design basis accidents.	Concurrent with implementation of the amendment
PSEG will include the hydrogen monitoring function in the Salem Updated Final Safety Analysis Report.	Concurrent with implementation of the amendment

ATTACHMENT 4
LR-N06-0201

LCR S06-05

PROPOSED CHANGES TO TS BASES PAGES

The following Technical Specifications Bases for Salem Unit 1 and Unit 2, Facility Operating License No. DPR-70 and DPR-75, are affected by this change request:

Salem Unit 1

Technical Specification	Page
Bases 3/4.6.4	B 3/4 6-4

Salem Unit 2

Technical Specification	Page
Bases 3/4.6.4	B 3/4 6-4

valve response time test ensures that on a loss of offsite power, each discharge valve actuates to the open position in accordance with the design to allow sufficient tank discharge into CFCU piping to maintain water filled, subcooled fluid conditions in three CFCU cooling loops, assuming the most limiting single failure.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

The opening of locked or sealed closed containment isolation valves (penetration flow paths)on an intermittent basis under administrative control includes the following considerations: (1) stationing a dedicated individual, who is in constant communication with the control room, at the valve controls, (2) instructing this individual to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment.

The main steam isolation valves (MSIVs) fulfill their containment isolation function as remote-manual containment isolation valves. The automatic closure of the MSIVs is not required for containment isolation due to having a closed system inside containment. The remote-manual containment isolation function of the MSIVs can be accomplished through either the use of the hydraulic operator or when the MSIV has been tested in accordance with surveillance requirement 4.7.1.5 the steam assist function can be credited.

Surveillance Requirement (SR) 4.6.3.1.3 only applies to the MS7 (Main Steam Drain) valves and the MS18 (Main Steam Bypass) valves. The MS167 (Main Steam Isolation) valves are tested for main steam isolation purposes by SR 4.7.1.5. For containment isolation purposes, the MS167s are tested as remote/manual valves pursuant to Specification 4.0.5.

Deleted

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water and 3) corrosion of metals within containment.

The surveillance requirements for the service water accumulator vessels ensure each tank contains sufficient water and nitrogen to maintain water filled, subcooled fluid conditions in three containment fan coil unit (CFCU) cooling loops in response to a loss of offsite power, without injecting nitrogen covergas into the containment fan coil unit loops assuming the most limiting single failure. The surveillance requirement for the discharge valve response time test ensures that on a loss of offsite power, each discharge valve actuates to the open position in accordance with the design to allow sufficient tank discharge into CFCU piping to maintain water filled, subcooled fluid conditions in three CFCU cooling loops, assuming the most limiting single failure.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

The opening of locked or sealed closed containment isolation valves (penetration flow paths) on an intermittent basis under administrative control includes the following considerations: (1) stationing a dedicated individual, who is in constant communication with the control room, at the valve controls, (2) instructing this individual to close these valves in an accident situation, and (3) assuring that the environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment.

The main steam isolation valves (MSIVs) fulfill their containment isolation function as remote-manual containment isolation valves. The automatic closure of the MSIVs is not required for containment isolation due to having a closed system inside containment. The remote-manual containment isolation function of the MSIVs can be accomplished through either the use of the hydraulic operator or when the MSIV has been tested in accordance with surveillance requirement 4.7.1.5 the steam assist closure function can be credited.

Surveillance Requirement (SR) 4.6.3.3 only applies to the MS7 (Main Steam Drain) valves and the MS18 (Main Steam Bypass) valves. The MS167 (Main Steam Isolation) valves are tested for main steam isolation purposes by SR 4.7.1.5. For containment isolation purposes, the MS167s are tested as remote/manual valves pursuant to Specification 4.0.5.

Deleted

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water, and 3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," March 1971.