

October 15, 2002

Mr. Harold W. Keiser
Chief Nuclear Officer & President
PSEG Nuclear LLC - X04
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 AND HOPE
CREEK GENERATING STATION - EVALUATION OF RELIEF REQUEST HC-
RR-W01 (TAC NOS. MB4787, MB4788, AND MB4778)

Dear Mr. Keiser:

By letter dated April 1, 2002, as supplemented on September 10, 2002, PSEG LLC requested relief from Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) under the provisions of 10 CFR 50.55a(a)(3)(i). The request would allow the use of Code Case N-573, "Transfer of Procedure Qualification Records Between Owners" for the qualification of welding and brazing procedures at the Salem Generating Station, Unit Nos. 1 and 2 and Hope Creek Generating Station.

Based on the information provided, the Nuclear Regulatory Commission (NRC) staff concludes that your proposal to use ASME Code Case N-573 provides an acceptable level of quality and safety. Therefore, the NRC staff authorizes you to use the proposed alternative pursuant to 10 CFR 50.55a(a)(3)(i) for the third 10-year interval for Salem Unit No. 1 and for the second 10-year interval for Salem Unit 2 and Hope Creek. Use of Code Case N-573 is authorized until such time as the Code Case is published in a revision to Regulatory Guide (RG) 1.147. At that time, if you intend to continue to implement this code case, you must follow all provisions in Code Case N-573 with limitations issued in RG 1.147, if any.

The NRC staff's safety evaluation is enclosed. If you have any questions, please contact your Project Manager, Robert Fretz, at 301-415-1324.

Sincerely,

/RA/

James W. Andersen, Acting Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-272, 50-311, and 50-354

Enclosure: As stated

cc w/encl: See next page

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DISTRIBUTION:

PUBLIC	RGN1	JPulsipher	PDI-2 R/F	OGC
TCheng	RFretz	GHill (2)	SLittle	GGeorgiev
WBeckner	JAndersen	ACRS	SRichards	MShodderly

*See previous concurrence

ACCESSION NUMBER: ML022670045

** SE input provided. No major changes made.

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DATE	10/11/02	10/11/02	09/19/02	10/10/02	10/11/02

OFFICIAL RECORD COPY

PSEG Nuclear LLC

Salem Nuclear Generating Station,
Unit Nos. 1 and 2

cc:

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Hancocks Bridge, NJ 08038

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR RELIEF

SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2

HOPE CREEK GENERATING STATION

PSEG NUCLEAR LLC

DOCKET NOS. 50-272, 50-311, AND 50-354

1.0 INTRODUCTION

In a letter dated April 1, 2002, as supplemented on September 10, 2002, PSEG Nuclear LLC (PSEG, the licensee) requested approval to use American Society of Mechanical Engineers Boiler Pressure and Vessel Code (ASME Code) Case N-573, "Transfer of Procedure Qualification Records Between Owners" at its Salem Nuclear Generating Station, Unit Nos. 1 and 2 and Hope Creek Generating Station. The relief was requested under the provisions of 10 CFR 50.55a(a)(3)(i) and involved the use of an alternative method to qualify welding procedures from those specified in Section IX of the ASME Code. Specifically, Code Case N-573 permits welding procedure specifications (WPS) qualified by one owner to be used by another owner provided that the owner which qualified the procedures certifies in writing that the procedure qualifications were conducted in accordance with a Quality Assurance Program that satisfies the requirements of ASME Code, Section XI IWA-1400. The owner accepting the procedure qualification record (PQR) must accept responsibility for the completed PQR. The owner accepting the PQR must also demonstrate technical competence in the application of the PQR by completing the welder qualification test using the parameters specified in the welding procedure.

2.0 BACKGROUND

The inservice inspection (ISI) of ASME Code Class 1, 2, and 3 components is to be performed in accordance with Section XI of the ASME Code and applicable addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if the licensee demonstrates that (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in ASME Code, Section XI, "Rules for Inservice

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Inspection of Nuclear Power Plant Components,” to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference 10 CFR 50.55a(b)12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable editions of Section XI of the ASME Code for the third 10-year interval for Salem Unit 1, and the second 10-year ISI interval for Salem Unit 2 and Hope Creek, are the 1995 Edition with the 1996 Addenda, the 1986 Edition, and the 1989 Edition, respectively.

3.0 TECHNICAL EVALUATION

3.1 Licensee’s Relief Request

Components for which the proposed alternative will be used:

ASME Class 1, 2, and 3 components

Code Requirement: (as stated)

ASME [Code], Section XI, IWA-4440(a), 1995 Edition, 1996 Addenda edition requires that the Owner qualify all welding procedures utilized for ASME [Code] XI repair/replacements.

Basis for Relief: (as stated)

Pursuant to 10CFR 50.55a(a)(3)(i), relief is requested from the requirements for welding and brazing procedure qualifications as stated in ASME, Section XI, IWA-4440. This request also seeks similar relief for all Procedure Qualification Records (PQRs) that would be required in support of alternative repair procedures in accordance with ASME, Section XI, IWA-4600.

PSEG Nuclear LLC (PSEG Nuclear) requests to utilize ASME Code Case N-573 as an additional alternative method to qualify welding procedures.

Exclusively adhering to the present welding and brazing qualification requirements presents an undue hardship, as considerable utility specific resources are unnecessarily duplicated when qualified procedures from other NRC licensed facilities have already been demonstrated to provide an acceptable level of quality and safety. The requested alternative will not reduce safety or quality but will provide for an alternative means by which to qualify welding procedures.

Similar relief has been granted to a number of utilities, including TXU Electric, Comanche Peak Units 1 and 2 (TAC Nos. MA9406 and MA9407) and Niagara Mohawk Power Corporation Nine Mile Point Nuclear Station (TAC No. MA7129).

Alternate Requirements: (as stated)

PSEG Nuclear seeks the approval of Code Case N-573, in order to allow the use of other Owners' PQRs that have been developed and controlled under comparable 10CFR50 Appendix B program controls. Steps to be taken by PSEG Nuclear to ensure the technical correctness of other Owner's PQRs and to ensure the resulting Welding Procedure Specifications (WPS) produce sound welds are presented in Table 1 [See licensee's application dated April 1, 2002] of this request. In summary, PSEG Nuclear shall:

- a. Verify that the source Owner has certified, by signing the PQR, that testing was performed in accordance with ASME Section IX.
- b. Verify that the providing source Owner, (utility) has certified in writing that the procedure qualification was conducted in accordance with a Quality Assurance Program that satisfies the requirements of IWA-1400, (e.g., 10CFR50 Appendix B).
- c. Be responsible for obtaining any additional supporting information needed for WPS development.
- d. Document, on each resulting WPS, the parameters applicable to welding. Each WPS shall be supported by all necessary PQRs.
- e. Accept responsibility for the PQR and document said acceptance by signature approval of each WPS that references the PQR.
- f. Demonstrate technical competence in application of the received PQR by completing a performance qualification test using the parameters of a resulting WPS.
- g. Accept and use a PQR only when it is received directly from the Owner that certified the PQR (source Owner).
- h. Document the use of Code Case N-573 within the repair/replacement plan where the implementing welding procedure(s) have been qualified through this alternative qualification method. This is a departure from the stated conditions within Code Case N-573. This is necessary, however, since ASME NIS-2 forms are not utilized at Salem Unit 1, Salem Unit 2 or Hope Creek. Instead ASME NIS-2A forms are employed in accordance with ASME Code Case N-523, previously approved for use at PSEG Nuclear.

Applicable Time Period: (as stated)

Approval for the use of this alternative, as provided by the Code Case, is requested to support the Salem Unit 1 fall outage in October of 2002, and subsequent Salem Unit Nos. 1 & 2 and Hope Creek outages.

3.2 NRC Staff's Evaluation and Conclusion

ASME Section XI, 1995 Edition with the 1996 Addenda, Paragraph IWA-4400(a) requires that all welding activities be performed in accordance with written WPSs that have been qualified by the Owner or repair organization in accordance with the requirements of the Codes specified in the Owner's Repair Program, per IWA-4130. This provision is applicable to Salem Units 1 and 2, and Hope Creek because the licensee implemented Code Case N-589-1, "Alternative Rules for Repairs, Replacements, or Modifications," which has been endorsed for general use in Regulatory Guide (RG) 1.147, Revision 12, as part of its repair program. Code Case N-589-1 allows the use of editions and addenda of ASME Section XI subsequent to those referenced in the plant's ISI program plan, for repairs, replacements and modifications, provided the subsequent editions and addenda have been approved by the NRC.

The licensee has proposed the use of Code Case N-573, "Transfer of Procedure Qualification Records Between Owners." This code case allows the use of a welding or brazing PQR qualified by one Owner to be used by another Owner for the development of the WPS. The specific requirements listed in Code Case N-573 are:

- A. The Owner that performed the procedure qualification test shall certify, by signing the PQR, that testing was performed in accordance with Section IX.
- B. The Owner that performed the procedure qualification test shall certify, in writing, that the procedure qualification was conducted in accordance with a Quality Assurance Program that satisfies the requirements of IWA-1400.
- C. The Owner accepting the completed PQR shall accept responsibility for obtaining any additional supporting information needed for WPS development.
- D. The Owner accepting the completed PQR shall document, on each resulting WPS, the parameters applicable to welding. Each WPS shall be supported by all necessary PQR's.
- E. The Owner accepting the completed PQR shall accept responsibility for the PQR. Acceptance shall be documented by the Owner's approval of each WPS that references the PQR.
- F. The Owner accepting the completed PQR shall demonstrate technical competence in application of the received PQR by completing a performance qualification test using the parameters of a resulting WPS.
- G. The Owner may accept and use a PQR only when it is received directly from the Owner that certified the PQR.
- H. Use of this Code Case shall be shown on the NIS-2 form documenting welding or brazing.

Based upon our review of the information provided by the licensee, the staff NRC finds that the above listed alternative requirements of ASME Code Case N-573 specify an acceptable level of control for the owner accepting a PQR. For example, PSEG would be required to (1) review

and accept the responsibility of the PQR and (2) demonstrate technical competence in application of the received PQR by completing a performance qualification test using the parameters of a resulting WPS. These actions will ensure the acceptability of the PQR prior to it being used at Salem Nuclear Generating Station, Unit Nos. 1 and 2 and Hope Creek Generating Station. The NRC staff also finds that qualification of a procedure for the purpose of joining materials by either welding or brazing may be performed by any Owner provided the applicable requirements for procedure qualification are maintained. The Owners may use procedures qualified by other Owners provided the conditions/requirements listed in Code Case N-573 are met.

The licensee has committed to comply with the requirements specified in Code Case N-573. Therefore, the proposed alternative provides an acceptable level of quality and safety, and the use of this proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the third 10-year ISI interval at Salem Nuclear Generating Station, Unit 1, and the second 10-year ISI interval at Salem Nuclear Generating Station, Unit 2 and Hope Creek Generating Station. Code Case N-573 is authorized until such time as the code case is published in a revision to Regulatory Guide (RG) 1.147. After that time, if the licensee wishes to continue to use Code Case N-573, it must follow the conditions and limitations, if any, specified in the RG.

Principal Contributor: G. Georgiev

Date: October 15, 2002