SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE FIRST TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM

PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION, UNIT 1

DOCKET NO.: 50-352

INTRODUCTION

The Technical Specifications for the Limerick Generating Station Unit 1, state that surveillance requirements for inservice inspection and testing of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Class 1, 2 and 3 components shall be applicable as follows: Inservice inspection of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

Pursuant to 10 CFR 50a(g)(4), ASME Code Class 1, 2 and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry and materials of construction of the components. In addition, inservice examination of components and systems pressure tests conducted during the First Ten-year interval shall comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) on the date twelve months prior to the date of issuance of the operating license, subject to the limitations and modifications listed therein. The components (including supports) may meet the requirements set forth in subsequent editions and addenda of the ASME Code incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein.

Pursuant to 10 CFR 50.55a(g)(5), if the licensee determines that conformance to an examination requirement of Section XI of the ASME Code is not practical for his facility, information is submitted to the Commission in support of that determination and a request made for relief from the ASME Code requirement. After evaluation of the determination, pursuant to 10 CFR 50.55a(g)(6)(i), the Commission may grant relief and impose alternative requirements as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed.

The Philadelphia Electric Company (the licensee) prepared the Limerick Generating Station, Unit 1 and Common Plant, First Ten-year Interval Inservice Inspection Program, Revision 3, to meet the requirements of the ASME Code, Section XI, 1980 Edition, including Winter 1981 Addenda except that the extent of examination for Class 2 piping welds is determined by the 1974 Edition, including Summer 1975 Addenda, pursuant to 10 CFR 50.55a(b). The First Ten-year began on February 1, 1986, and ends February 1, 1996.

Revision 1 of the First Ten-year Interval Inservice Inspection Program was submitted for staff review in October, 1985. Additional information was submitted by the Licensee, including requests for relief from impractical ASME Code requirements, on August 14, 1986, January 30, 1987, and August 11, 1987. The program was evaluated by the staff and their contractor, Idaho National Engineering Laboratory, for a) compliance with the appropriate ASME Code Section XI Edition and Addenda, b) acceptability of the examination sample, c) exclusion criteria, and d) compliance with augmented and/or other examination commitments identified during the licensing process.

EVALUATION

The determinations addressed by the Licensee in the First Ten-year Interval Inservice Inspection Program, Revision 3, and to staff's request for additional information that certain ASME Code requirements were impractical to perform at the Limerick Generating Station, Unit 1 and Common Plant were evaluated. A summary of our evaluation is shown in Table 1. The detailed evaluation is attached in the report from our contractor, Idaho National Engineering Laboratory.

CONCLUSION

We conclude from our evaluation that the First Ten-year Interval Inservice Inspection Program, Revision 3, for the Limerick Generating Station, Unit 1 and Common Plant is acceptable and in compliance with 10 CFR 50.55a(g)(4). We determined that certain ASME Code Section XI examination requirements are impractical to perform at the Limerick Generating Station, Unit 1 and Common Plant. The Licensee has demonstrated that either the proposed alternative would provide an acceptable level of quality and safety or that compliance with the requirement would result in hardship and/or unusual difficulty without a compensating increase in the level of quality and safety. Relief is granted from ASME Code Section XI requirements for request numbers 2.4.4, 2.7.1, 2.7.2, 2.7.3, 3.1.1(1), 2.13.1, 3.4.1, 3.4.2, 3.4.3, 3.7.1, 3.1.1(2), 3.10.1, 3.10.2 and 6.4.1. The staff is in the process of reviewing the examination requirements for the reactor pressure vessel and relief is not granted for request numbers 2.4.1, 2.4.2. and 2.4.3, category B-A welds.

Table 1

Status of Requests for Relief from ASME Code Requirements

Request Number	Examination Category	Description	Status
2.4.1	B-A Item B.1.11	Reactor Pressure Vessel Shell Circumferential Welds	Not granted
2.4.2	B-A Item B.1.12	Reactor Pressure Vessel Shell Longitudinal Welds	Not granted
2.4.3	B-A Item B1.30	Reactor Pressure Vessel Shell-to-Flange Weld	Not granted
2.4.4	B-D Item B3.90	Reactor Pressure Vessel Nozzle-to-Vessel Welds	Granted
2.7.1	B-F Item B5.130	Class 1 Dissimilar Metal Circumferential Welds	Granted
2.7.2	B-J Item B9.11	Class 1 Pressure Retaining Circumferential Welds in Piping	Granted
2.7.3	B-K-1 Item B10.10	Integrally Welded Attachments in Class 1 Piping	Granted
3.1.1(1)	B-J Items B9.11 and B9.21	Pressure Retaining Class 1 Welds in Piping within the "No Break" Boundaries	Granted
2.13.1	B-M-2 Item B12.50	Class 1 Valve Bodies	Granted
3.4.1	C-A Item C1.10	RHR Heat Exchanger Shell Circumferential Weld	Granted
3.4.2	C-B Item C2.21	RHR Heat Exchanger Nozzle Weld	Granted
3.4.3	C-C Item C3.10	RHR Heat Exchanger Integrally Welded Attachments	Granted
3.7.1	C-C Item C3.20	Integrally Welded Attachments on Class 2 piping	Granted

Table 1

Status of Requests for Relief from ASME Code Requirements

Request Number	Examination Category	Description	Status
3.1.1(2)	C-F Item C5.21	Pressure Retaining Class 2 Piping Welds with "No Break" Boundaries	Granted
3.10.1	C-G Items C6.10	RHR and Core Spray Pump Casing Welds	Granted
3.10.2	C-C Item C3.30	RCIC Pump Casing Integral Attachment Welds	Granted
6.4.1	F-C Items F3.10 through F3.50	Class 1, 2 and 3 Mechanical Snubbers	Granted