UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE INSERVICE INSPECTION PROGRAM AND REQUESTS FOR RELIEF

PENNSYLVANIA POWER AND LIGHT COMPANY

SUSQUEHANNA STEAM ELECTRIC STATION UNIT 2

DOCKET NO. 50-388

INTRODUCTION

The Technical Specification for the Susquehanna Steam Electric Station Unit 2 states that inservice examination of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a(g) except where specific written relief has been granted by the Commission. Some plants were designed in conformance to early editions of this Code Section, consequently certain requirements of later editions and addenda of Section XI are impractical to perform because of the plants' design, component geometry, material of construction or the need for extensive temporary modifications and the resultant substantial exposure to plant personnel. Regulation 10 CFR 50.55a(g)(6)(i) authorizes the Commission to grant relief from those requirements upon making the necessary findings.

By letters dated February 28, 1985, and August 12, 1986, Pennsylvania Power and Light Co. (PP&L) submitted its inservice inspection program and additional information related to requests for relief from certain Code requirements determined to be impractical to perform on the Susquehanna Steam Electric Station Unit 2 during the 1st inspection interval. The program is based on the requirements of the 1980 Edition through Winter 1980 Addenda of Section XI of the ASME Code and remains in effect until February 12, 1995, unless the program is modified or changed prior to the interval end date.

EVALUATION

The inservice inspection program and the results for relief from the requirements of Section XI that have been determined to be impractical to perform have been reviewed by the Staff's contractor, Science Applications International Corporation (SAIC). The contractor's Technical Evaluation Report (TER), evaluating the licensee's inservice inspection program plan and relief requests, is attached. The staff has reviewed the TER and agrees with its evaluations and conclusions. A summary of the relief request determinations made by the staff is presented in the attachment 1. The granting of relief is based upon the fulfillment of any commitments made by the licensee in its basis for the relief request and the alternate proposed examination.

CONCLUSION

Based on the review, the staff concludes that the relief from the code-required examination and testing may be granted provided the alternate methods imposed through this document are followed. The staff further concludes that the licensee's inservice inspection program will still provide reasonable assurance of the piping and component pressure boundary structural integrity. During the review of the licensee's inservice inspection plan, the staff has not identified any significant misinterpretation or omissions of Code requirements. Thus, the inservice inspection plan is acceptable for implementation.

Principal Contribution: B. Turovlin

ATTACHMENT 1

TABLE 1

CLASS 1 COMPONENTS

LICENSEE'S REQUEST NO.	IWB-2500-1 ITEM NO.	IWB-2500 EXAM CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATE EXAMINATION	RELIEF REQUEST STATUS
2RR-9	B1.11	B-A	Reactor Vessel	Circumferential Shell welds AD	Volumetric	80% of weld AD with special wedge	Granted
	B1.12			Longitudinal Shell Welds BK and BM	Volumetric	None	Granted
2RR-5	B3.90	B-D	Reactor Vessel	Nozzle-to-Vessel Welds N4A and N4D	Volumetric	Periodic System Leakage Test* (Category B-P) and Inservice Hydrostatic Test* (Category B-P)	Granted
2RR-8	B9.10 B9.11 B9.12	B-J	Piping Selection	Nominal Pipe Size 4 in. & Greater, B9.11: Circumferential Welds, B9.12: Longitudinal Welds.	Surface & Volumetric		Relief not needed for this (1st) interval only.

* These alternatives described by the licensee are already required by the code.

TABLE 1

CLASS 1 COMPONENTS (CONTINUED)

LICENSEE'S REQUEST NO.	IWB-2500-1 ITEM NO.	IWB-2500 EXAM CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATE EXAMINATION	RELIEF REQUEST STATUS
2RR-8	B9.20 B9.21	B-J	Piping Selection	Nominal Pipe Size < 4 in. Circumferential Welds	Surface		Relief not needed for this (1st) interval only
	B9.22			Longitudinal Welds			Same as above
	B9.30		Branch Piping Connections Selection				
	B9.31			Nominal Pipe size ≥ 4 in.	Volumetric and Surface		Same as above
	B9.32			Nominal Pipe size < 4 in.	Surface		Same as above
	B9.40		Socket Welds		Surface		Same as above
2RR-1	B12.20	B-L-2	Pump Casings	Internal surfaces Reactor Recirculation Pump	Visual VT-3	Any valve(s) or pump(s) disassembled have visual examination	Granted
2RR-2	B12.50	B-M-2	Valve Bodies Exceeding 4 in.	Internal surfaces	Visual, VT-3	Same as above	Granted

TABLE 2

CLASS 2 COMPONENTS

LICENSEE'S REQUEST NO.	IWB-2500-1 ITEM NO.	IWB-2500 EXAM CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATE EXAMINATION	RELIEF REQUEST STATUS
2RR-3	C5.10	C-F	Piping $\leq$ ½ in. Nominal wall thickness	Circumferential welds	Surface		Relief not needed for (1st) interval only
	C5.20		Piping >½ in. nominal	Circumferand Longitudinal welds	Surface and Volumetric		
	C5.31		Branch Pipe Connections	Circumfer-Welds	Surface		
2RR-4	C6.10	C-G	Pumps, Core Spray and RHR	Pressure Retaining Pump Casing Welds	Surface	Visual (VT-3) when disassembled for maintenance.	Granted
				Discharge elbow-to-sleeve forging weld Discharge elbow-to-sleeve plate flange weld			Relief not needed welds are located within pressure boundary

TABLE 3

ASME CLASS 3 COMPONENTS - NO RELIEF REQUESTS

PRESSURE TESTS - NO RELIEF REQUESTS

TABLE 4

COMPONENT SUPPORTS

Licensee's Request No.	Code Requirements	Licensee's Proposed Alternative Examination	Relief Request Status
2RR-6	Non-Snubber Exemption and Selection Criteria		
	IWF-1230 Supports Exempt from Examination and Test:	Exemption	
	In the course of preparation.	Component supports shall be exempt from the VT-3 and VT-4 examination requirements as follows:	Relief not needed exemption criteria conforms to code
		(a) Class 1 and 2 components which are exempt from surface and volumetric examination in accordance with IWB-1220 and IWC-1220, respectively, of the Code.	
		(b) Class 3 components which are 4 inch nominal pipe size and smaller in accordance with IWD-1220.1 of the Code.	
	IWF-2510 Supports Selected for Examination	Selection Criteria	
	(a) Component supports selected for examination shall be the supports of those components that are required to be examined under IWB, IWC, and IWD during the first inspection interval.	Criteria for Class 1, 2 and 3 pipe supports not exempt from examination is based on statistical sampling.	Granted
	(b) For multiple components within a system of similar design, function, and service, the supports of only one of the multiple components are required to be examined.		

TABLE 5

STANDARDS FOR EXAMINATION EVALUATIONS

LICENSEE'S RELIEF REQUEST NO.	SYSTEM OR COMPONENT	REQUIREMENT	LICENSEE PROPOSED ALTERNATIVE EXAMINATION	RELIEF REQUEST STATUS
2RR-7	Snubbers 50 kips or greater	In preparation	Functional testing requirements of Technical Specification 3.4.7.4	No relief required. Testing per T.S. should meet Code requirements if Licensee ensures that 10% of all snubbers rated less than 50 kips are examined.
	Snubbers less than 50 kips	Representative 10% sample tested each inspection period.	VT-3 and VT-4 visual	