SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO REQUESTS FOR RELIEF FROM INSERVICE INSPECTION REQUIREMENTS

Indiana and Michigan Electric Co.

Donald C. Cook Units 1 and 2

DOCKET NOS. 50-315 AND 316

INTRODUCTION

Technical Specification 4.4.10 for the Donald C. Cook Nuclear Power Plant Units 1 and 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. Certain requirements of later editions and addenda of Section XI are impractical to perform on older plants because of the plants' design, component geometry, and materials of construction. Thus, 10 CFR 50.55a(g)(6)(i) authorizes the Commission to grant relief from those requirements upon making the necessary findings.

By letters dated November 18, 1977, September 22, 1978, August 25, 1978, September 11, 1979, July 2, 1982, September 2, 1982, and September 23, 1982, Indiana and Michigan Electric Company submitted its inservice inspection program, revisions, or additional information related to requests for relief from certain Code requirements determined to be impractical to perform on the Donald C. Cook Nuclear Power Plant Units 1 and 2 during the inspection interval. The program is based on the 1974 Edition including Summer 1975 Addenda or Section XI of the ASME Code, and covers the following periods:

- Unit 1 - Second and Third 40-month periods of the first interval (December 23, 1978 to August 23, 1985)
- Unit 2 - The entire first ten-year interval from July 1, 1978 to July 1, 1988.

EVALUATION

Requests for relief from the requirements of Section XI which have been determined to be impractical to perform have been reviewed by the Staff's contractor, Science Applications, Inc. The contractor's evaluations of the licensee's requests for relief and his recommendations are presented in the Technical Evaluation Report (TER) attached (ATTACHMENT 1). The staff has reviewed the TER and agrees with the evaluations and recommendations. A summary of the determinations made by the staff is presented in the following tables:

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TABLE 1

CLASS 1 COMPONENTS

IWB-2600 ITEM NO.	IWB-2500 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAM	RELIEF REQUEST STATUS
B1.2	B-B	Reactor Vessel	Circumferential seal welds in closure head: 1-C-02 and 2-CMC-02	Volumetric	None	Granted Provided: o The Accessible portion of each dollar head weld is examined. o The examination of accessible Category B-B welds is increased to achieve a sample whose total length includes the weld for which relief was requested.
B1.3 (Unit 2 only)	B-C	Reactor Vessel	Closure Head Flange Weld	Volumetric 100% of weld	Examine 96% of weld	Granted
B2.2 (Unit 2 only)	B-D	Pressurizer	Nozzle-to-Vessel Weld on surge line	Volumetric	Volumetric examination from vessel side only	Granted provided that a full Vee volumetric examination is conducted from the accessible side and supplemented with surface exam.
B2.8 (Unit 2 only)	B-H	Pressurizer	Integrally Welded Vessel Support. 2-PRZ-20	Volumetric	UT Along the accessible length	Granted
B4.5 (Unit 1 only)	B-J	Reactor Coolant System and Chemical and Volume Control System	Pipe Welds No. 015 and 23F	Volumetric 100% of weld	Examine 82% of of weld No. 015 and 83% of weld No. 23F	Granted

TABLE 1 (Continued)

CLASS 1 COMPONENTS

IWB-2600 ITEM NO.	IWB-2500 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAM	RELIEF REQUEST STATUS
B4.6 (Unit 2 only)	B-J	Piping	Branch Pipe Connection Weld No. 08N	Volumetric	Volumetric to extent practical supplemented by surface	Granted
B4.9 (Unit 1)	B-K-1	Reactor Coolant and Safety Injection	Integrally-Welded Piping Supports:	Volumetric		Granted
			24-F-HL-1		(a)**	Granted
			24F-HL-2		(a)	Granted
			24F-HL-3		(a)	Granted
			24F-HL-4		(a)	Granted
			03S-RL-4		(a)	Granted
			27S-PR-1		(a)	Granted
			135-PS		(c)	Granted
			29S-RL-1		(a)	Granted
			29S-RL-2		(a)	Granted
			29S-RL-3		(a)	Granted
			15F-PS-2		(e)	Granted
			51S		(c)	Granted
			27S-HL-1		(e)	Granted
			23S-HL-3		(e)	Granted
			23S-HL-4		(e)	Granted
B4.9 (Unit 2)	B-K-1	Reactor Coolant, Safety Injection, and Chemical and Volume Control Systems	Integrally-Welded Piping Supports:	Volumetric		
			PR1-PL-2 (LTP REF No. 047500)		(a)	Granted
			PR1-PL-2 (LTP REF No. 047500)		(a)	Granted
			PR1-PL-2 (LTP REF No. 047600)		(a)	Granted
			PR1-PL-1 (LTP REF No. 054800)		(a)	Granted

TABLE 1 (Continued)

CLASS 1 COMPONENTS

IWB-2600 ITEM NO.	IWB-2500 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAM	RELIEF REQUEST STATUS
B4.9 (Unit 2) (Cont.)			PR1-PL-2 (LTP REF No. 054900)		(a)	Granted
			PR1-PL-3 (LTP REF No. 055000)		(a)	Granted
			PR-1-PL-1 (LTP REF No. 088000)		(a)	Granted
			PR-1-PL-2 (LTP REF No. 088050)		(a)	Granted
			PR1-PL-1 (LTP REF No. 130000)		(a)	Granted
			PR1-PL-1 (LTP REF No. 134300)		(a)	Granted
B4.9	B-K-1	Reactor Coolant Pumps	Integrally-Welded Support Lug Welds	Volumetric	Surface	Granted
B5.6	B-L-1	Reactor Coolant Pumps	Pump Casing Welds	Volumetric, Weld and Base Metal one wall thickness beyond edge of weld	Volumetric, Weld and Base Metal ½ inch on either side of weld	Granted

** (a) Volumetric supplemented by surface
(c) Surface only
(e) Examine at least 75% of weld

TABLE 2

CLASS 2 COMPONENTS

IWC-2600 ITEM NO.	IWC-2520 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAM	RELIEF REQUEST STATUS
C2.1	C-G	Main Steam and Feedwater	Piping Welds in Containment Penetrations	Volumetric	None	Granted provided that the first accessible weld outside the penetration is examined.
C2.1	C-G	Main Steam	Piping Welds covered by whip restraints	Volumetric	None	Granted provided that an adjacent weld in one main system line is examined.
C2.3	C-G	Main Steam	Safety Valve Header and Feedwater Branch Connections	Volumetric	Surface	Granted
C2.1	C-G	Containment Spray System	All Piping Welds	Volumetric	Visual	Not Granted
C2.1	C-G	Emergency Core Cooling System	Piping Welds	Volumetric	Visual	Not Granted
C2.1	C-G	CVCS - Reactor Letdown and Charging	Welds in Following: (1) Volume Control Tank to Charging Pump (Unit 1)	Volumetric	Visual	Not Granted

TABLE 2 (Continued)

CLASS 2 COMPONENTS

IWC-2600 ITEM NO.	IWC-2520 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAM	RELIEF REQUEST STATUS
C2.1 (Cont.)			(2) Refueling water storage tank to Centrifugal Charging Pump			
			(3) Supply Header to Centrifugal Charging Pump "E"			
			(4) Supply Header to Centrifugal Charging Pump "W"			

TABLE 3

CLASS 3 COMPONENTS

[No Relief Requests]

TABLE 4

PRESSURE TEST

SYSTEM OR COMPONENT	IWA-5000 IWB-5000, IWC-5000, AND IWD-5000 TEST PRESSURE REQUIREMENT	LICENSEE PROPOSED ALTERNATIVE TEST PRESSURE	RELIEF REQUEST STATUS

[No Relief Requests]

TABLE 5

ULTRASONIC EXAMINATION TECHNIQUE

SYSTEM OR COMPONENT	REQUIREMENT	LICENSEE PROPOSED ALTERNATIVE TEST PRESSURE	RELIEF REQUEST STATUS

[No Relief Requests]

TABLE 6

GENERAL RELIEF REQUESTS ALL CLASSES/COMPONENTS

SYSTEM/COMPONENT	REQUIREMENT	LICENSEE ALTERNATIVE	RELIEF REQUEST STATUS

[No Relief Requests]

Based on the review summarized, the staff concludes that relief granted from the examination requirements and alternate methods imposed through this document give reasonable assurance of the piping and component pressure boundary and support structural integrity, that granting relief where the Code requirements are impractical is authorized by law and will not endanger life or property, or the common defense and security, and is otherwise in the public interest considering the burden that could result if they were imposed on the facility.

Environmental Considerations

We have determined that granting relief from specific ASME Section XI Code requirements does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that this is an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the grant of this relief.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the actions do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, the actions do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the actions will not be inimical to the common defense and security or to the health and safety of the public.

Date: APR 15 1983

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