REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8005200598 DOC.DATE: 80/05/15 NOTARIZED: NO DOCKET #
FACIL:50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316

AUTH.NAME	AUTHOR AFFILIATION
MALONEY,G.P.	Indiana & Michigan Electric Co.

RECIP.NAME	RECIPIENT AFFILIATION
DENTON,H.R.	Office of Nuclear Reactor Regulation

SUBJECT: Forwards executive summary of plant shielding design & equipment radiation evniron qualification review,conducted per 800227 meeting.

DISTRIBUTION CODE: A001S COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 3
TITLE: General Distribution for after Issuance of Operating Lic

NOTES: I&E - 3 CYS OF ALL MATL

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
ACTION:	05 BC ORB#1	7	7			
INTERNAL:	01 REG FILE	1	1	02 NRC PDR	1	1
	12 I&E	2	2	15 CORE PERF BR	1	1
	17 ENGR BR	1	1	18 REAC SFTY BR	1	1
	19 PLANT SYS BR	1	1	20 EEB	1	1
	21 EFLT TRT SYS	1	1	EPB-DOR	1	1
	OELD	1	0	STS GROUP LEADR	1	1
EXTERNAL:	03 LPDR	1	1	04 NSIC	1	1
	23 ACRS	16	16			

MA 4 GD

TOTAL NUMBER OF COPIES REQUIRED: LTTR ~~38~~ 41 ENCL ~~37~~ 40

8005200 598

INDIANA & MICHIGAN ELECTRIC COMPANY

P. O. BOX 18
BOWLING GREEN STATION
NEW YORK, N. Y. 10004

May 15, 1980
AEP:NRC:00334D

Donald C, Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

Attached herein is the executive summary of the Plant Shielding Design review and Equipment Radiation Environmental Qualification review which were conducted in accordance with the guidance furnished to us in our meeting with your Staff on February 27, 1980. The detailed report will be available at the Plant for review by the Staff of the Office of Inspection and Enforcement.

Indiana & Michigan Electric Company interprets 10 CFR 170.22 as not requiring that a fee accompany this letter.

Very truly yours,

G. P. Maloney
Vice President

GPM:em

Attachment

cc: R. C. Callen
R. Charnoff
D. V. Shaller - Bridgman
R. S. Hunter
R. W. Jurgensen

A001 S/1

ATTACHMENT TO AEP:NRC:00334D

EXECUTIVE SUMMARY

A detailed review was conducted to establish the adequacy of existing shielding to handle post accident fluids containing NUREG-0578 sources and to assess the capability of the systems and components that would handle post-accident fluids to withstand the post-accident radiation environment. The safety injection system, containment spray system, residual heat removal system, charging system, and the post-accident sampling system were identified as the systems that would carry post-accident radioactive fluid. The gaseous radwaste system and the chemical and volume control system were not included in the review since these systems can be promptly isolated and the installation of reactor vessel head vent preempts the use of these systems for degassing. Radiation dose levels around the post-accident fluid-carrying lines were re-evaluated using NUREG-0578 source terms and as-built shield thicknesses. The access requirement for each area surrounding the post-accident fluid carrying lines were reviewed in conjunction with all safety analysis requirements and plant emergency operating procedures. It was determined that access to the areas around these lines and equipment is normally not expected and that access, if required, will be gained under strict administrative control with proper radiation protection precautionary measures. Based on this review, it was concluded that no additional shielding is required to bring the personnel exposures within the GDC 19 dose criteria.

Post-accident fluid-carrying lines and their components were further evaluated to determine whether or not these systems and their components are adequate to withstand doses from NUREG-0578 source terms. Systems and components with radiation environmental qualification were reviewed to establish that the qualification level exceeded the required level. All the components with radiation environmental qualification are qualified to levels that are higher than the expected dose levels following a design basis accident.

There were certain items which did not have any radiation environmental qualification. The material specifications for these components were carefully reviewed and all radiosensitive parts were identified. Radiation doses were calculated for the specific locations using NUREG-0578 source terms. The doses were then compared to the threshold or allowable doses for the materials specified in Table C-1 of Appendix C of Enclosure No. 4 to IE Bulletin No. 79-01B. Those radiosensitive parts which could, under the assumptions of the review, experience exposures in excess of the threshold for the materials involved are being considered for replacement. The components recommended for replacement are the containment sump level indicators and certain components of the interim post-accident sampling system. The efforts for replacement will be carried out along with the efforts associated with the close-out of IE Bulletin No. 79-01B review.

For further details of this review, please refer to the detailed report which will be available at the Plant and at our Engineering offices.