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50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
AUTH.NAME AUTHOR AFFILIATION
HUNTER,R.S. Indiana & Michigan Electric Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards "Safe Shutdown Capability Assessment & Proposed Mods,10CFR50,App.R Section III.G,Units 1 & II,DC Cook Nuclear Plant," per 820719 ltr.Request for approval of alternative shutdown sys encl. "All Rcpts"

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INDIANA & MICHIGAN ELECTRIC COMPANY

P. O. BOX 18
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NEW YORK, N. Y. 10004

March 31, 1983
AEP:NRC:0692E

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
Fire Protection - Appendix 'R', Section III G Compliance

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

Dear Mr. Denton:

In our July 19, 1982 letter (AEP:NRC:0692C) and in accordance with a schedular exemption requested therein, we proposed submitting to you by March 31, 1983, our plans and schedules to comply with Section III.G of Appendix R. While the NRC has not acted to date on our schedular exemption request, we have been proceeding in accordance with our proposed schedule. This letter, its Attachments, and the enclosed report entitled "SAFE-SHUTDOWN CAPABILITY ASSESSMENT AND PROPOSED MODIFICATIONS 10 CFR 50, Appendix R, Section III.G UNITS 1 AND 2 DONALD C. COOK NUCLEAR PLANT" (hereafter referred to as the Report) serve to satisfy the proposal we made in the above referenced letter. These documents have been prepared in close cooperation and consultation with Engineering, Planning, and Management, Inc. (EPM).

Upon the conclusion of our work, it is our belief that with the addition of various modifications described in the Report, all of the areas at the Donald C. Cook Nuclear Plant comply or will comply with the requirements of Section III.G of Appendix R or will achieve an equivalent level of protection. For several key locations, alternative shutdown capability is proposed in accordance with Section III.G.3 of Appendix R. For a few locations, exemption requests, principally from the fire suppression requirements of Section III.G.3, are proposed where compliance with provisions of the requirements will not significantly enhance fire protection safety.

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Attachment No. 1 to this letter contains our request for approval of the alternative shutdown systems and our limited requests for exemptions (including schedular exemptions regarding Sections III.G and III.J of Appendix R). The Report contains the technical description of the proposed alternative shutdown capability and contains justifications for the exemption requests. The Report also includes our plans for modifications not requiring NRC approval. Attachment No. 2 to this letter sets forth the schedule for the implementation of the

referenced modifications, including installation of alternative shutdown capability.

In light of the accelerated schedule under which the analysis was performed, the detailed design process has not been carried out for the proposed modifications. The detailed design process will address the selection of materials, particular methods of implementation and the actual lay-out at the Plant. The proposed modifications will also be reviewed under 10.CFR.50.59. We do not presently anticipate that any revisions to our analysis will be required as a result of either the detailed design process or the 10.CFR.50.59 reviews. However, if any revision to our analysis is required, we will inform you accordingly.

We believe that the Report includes all of the information required for your review. Should you desire any additional information, or have any questions regarding this submittal, we will be glad to meet with members of your staff at their convenience.

This letter has been prepared following Corporate Procedures which incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,

R. S. Hunter
Vice President

cc: John E. Dolan - Columbus
M. P. Alexich
R. W. Jurgensen
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Charnoff
J. G. Keppler - Regional Administrator, NRC Region III
NRC Resident Inspector at Cook Plant - Bridgman

Attachment No. 1 to AEP:NRC:0692E
Request for Approval and Exemptions

I. Request for approval of alternate shutdown systems

Pursuant to 10.CFR.50.48(c)(5), Indiana & Michigan Electric Company (I&M) requests approval of alternative shutdown systems for the Donald C. Cook Nuclear Plant Units Nos. 1 and 2 ("Cook Plant") to achieve compliance with Section III.G.3 of Appendix R for certain areas. Alternative shutdown systems are proposed for the control rooms, cable vaults, switchgear rooms and other appropriate areas. The principal alternative shutdown method is based on the use of the unaffected unit's safe shutdown equipment to achieve safe shutdown in the fire affected unit. A detailed description of the proposed alternative shutdown systems is provided in Section 5 of the enclosed Report.

II. Request for exemptions

Pursuant to 10 CFR 50.12(a), I&M requests exemptions from certain of the requirements in 10.CFR.50.48(c) and Section III.G of Appendix R to 10 CFR 50.48(b) for the Cook Plant. The specific provisions from which exemption is sought are set forth below.

II.A. Exemptions with respect to Section III.G.2.c of Appendix R

An exemption from 10 CFR 50.48 (b) with respect to the requirements of Section III G.2.c of Appendix R is requested for the three fire zones. Details of the specific zone exemption request are contained in Section 7 of the Report as follows:

Fire Zone 1 - Auxiliary Building el. 573' Fire Area; Section 7.2
Fire Zone 29 G - Essential Service Water Pump Fire Area; Section 7.7
Fire Zone 44 S - Auxiliary Building el. 609' Fire Area; Section 7.10

Section III.G.2.c of Appendix R requires the enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a one-hour rating, along with the installation of fire detectors and an automatic fire suppression system. For fire zones 1 & 29 G an exemption is requested from the installation of automatic fire suppression systems, and for fire zone 44 S an exemption is requested from the installation of a one-hour barrier. It is our belief that with respect to these exemption requests, the strict adherence to the requirements of Section III G.2.c would not significantly enhance the fire protection safety at the Cook Plant. For each exemption request, the Report contains a detailed description of the safe shutdown equipment, cabling, fire protection systems and, proposed modifications for the particular area under consideration. The Report also contains the results of the fire hazards analysis and the justification for exemption for the particular area.

II.B. Exemptions with respect to Section III G.3 of Appendix R

An exemption from 10 CFR 50.48(b) with respect to the fixed fire suppression requirements of Section III G.3 of Appendix R is requested for sixteen fire zones (itemized below). Section 7 of the Report

enclosed with this letter details the specific zone exemption requests, as follows:

Section	Fire Zone No.	Unit	Area
7.3	14	1	Transformer Room
7.4	20	2	Transformer Room
7.5	29(A,B,E)	1	Essential Service Water Pump Room
7.6	29(C,D,F)	2	Essential Service Water Pump Room
7.8	33,33A,33B	1	East Main Steam Enclosure
7.9	34,34A,34B	2	East Main Steam Enclosure
7.11	53	1	Control Room
7.12	54	2	Control Room
7.13	66	1	Containment Piping Annulus
7.14	67	1	Containment Lower Volume
7.15	74	2	Containment Piping Annulus
7.16	75	2	Containment Lower Volume
7.17	120	1	Containment Accumulator Enclosure East
7.18	121	2	Containment Accumulator Enclosure East
7.19	122	1	Containment Instrument Room
7.20	123	2	Containment Instrument Room

It is our belief that for the fire zones under consideration, the strict adherence to the fire suppression requirements would not significantly enhance the fire protection safety at the Cook Plant. For each exemption request, the Report contains a detailed description of the safe shutdown equipment, cabling, fire protection systems, and proposed modifications for the particular area under consideration. The Report also contains the results of the fire hazards analysis, and the justification for exemption for the particular area.

II. C. Exemption with respect to 10.CFR.50.48(c)

Two schedular exemptions from 10.CFR.50.48(c) are requested with respect to Sections III.G. and III.J of Appendix R.

First, a schedular exemption from 10.CFR.50.48(c)(4) with respect to the installation of modifications to achieve compliance with Section III.G.3 of Appendix R is hereby being requested.

In our letter No. AEP:NRC:0692C we only requested relief from the installation schedules established for Section 50.48(c)(2) and (3) such that modifications for Section III.G.2 would be implemented by the end of the first refueling outage after January 1, 1984. At that time we did not anticipate the use of alternate shutdown systems substantially different from what we presently have in achieving compliance with Appendix R, Section III.G. However, due to the configuration and congestion of safe shutdown equipment, cables, and associated circuits, our analysis determined the need to utilize alternate shutdown systems as a mechanism to achieve compliance. A schedular exemption from the requirements of 10.CFR.50.48(c)(4) is requested due to the lead times associated with equipment delivery of various items required to implement the modifications, as well as the need to have a dual unit outage to implement some of the modifications requiring that condition.

Therefore, in concordance with the schedule presented in Attachment No. 2 to this letter, we are hereby requesting an extension to the time allowed for the implementation of Section III.G.3 modifications, to match the exemption we have already requested in our July 19, 1982 letter to approximately September 30, 1985.

Second, we request that the date for compliance with Section III.J be extended to October 31, 1985, that is one month following the completion of installation of the alternative shutdown systems, referenced in Part I above. The emergency lighting requirements of Section III.J must be consistent with the modifications being proposed for compliance with Section III.G.3 of Appendix R. To ensure the correct placement of lighting, a walk-through of the new alternative shutdown procedure will be necessary. To allow time for this walk through, an exemption is requested for one month following the completion of the installation of the alternative shutdown capability. This request modifies the exemption request in our July 19, 1982 letter.

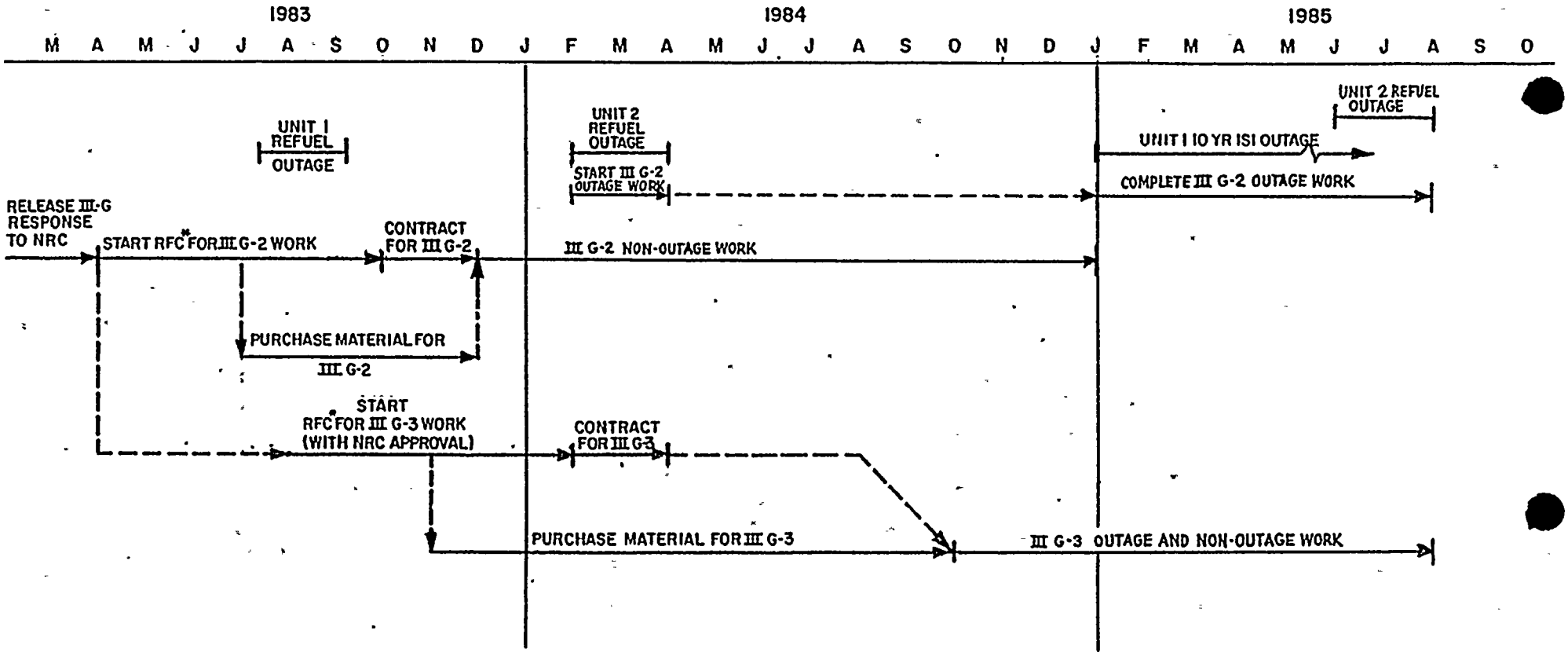
Attachment No. 2 to AEP:NRC:0692E
Schedule for Implementation of Modifications

This schedule outlines Indiana & Michigan Electric Company's program for installing the modifications described in the Report.

Planned Unit outages are indicated on this schedule for reference purposes. These planned outages are subject to some change based on our actual operating performance, including unscheduled outages. Any deviations from the indicated dates are expected to be minor. As noted on the schedule, work that does not require a unit outage will be initiated upon completion of engineering and design and delivery of the necessary material to the plant site.

The schedule for the installation of Section III.G.3 modifications is keyed to NRC approval of our proposed alternate shutdown systems. An anticipated date for this approval was selected based on informal conversations with the staff in July 1982, concerning our compliance program. At that time it was indicated that the NRC Staff could complete their review of our Report in July 1983. Although we were not anticipating the use of an alternate shutdown system at that time, we have assumed for scheduling purposes that the NRC review and approval of our alternate shutdown systems will be coincident with the review of the Report. Therefore, we selected August 1, 1983 as the date by which NRC approval would be granted and we would be able to initiate the formal design and engineering processes. Our schedule illustrates this, along with the schedular exemption request contained in Attachment No. 1.

D.C.COOK PLANT UNITS 1 & 2
APPENDIX-R
SCHEDULE FOR IMPLEMENTATION
OF MODIFICATIONS



* NOTE: RFC IS AN ACRONYM FOR AEPSC ENGINEERING AND DESIGN CHANGE PROCESS