

50-315

FILE NUMBER

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

TO:

MR B RUSCHE

FROM:

INDIANA & MICHIGAN PWR CO
NEW YORK, NY
JOHN TILLINGHAST

DATE OF DOCUMENT

7-20-76

DATE RECEIVED

7-23-76

☒ LETTER☒ NOTORIZED

PROP

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NUMBER OF COPIES RECEIVED

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1 Sign

DESCRIPTION

LTR NOTORIZED 7-20-76.....

LTR REQUESTING THAT THE OPERATING
LICENSE BE AMENDED TO PERMIT OPERATION AT
STEADY STATE CORE POWER LEVELS NOT IN EX-
CESS OF 3250 MEGAWATTS.....

ENCLOSURE

ACKNOWLEDGED

DO NOT REMOVE

PLANT NAME: DONALD C. COOK

(4-PG)

SAFETY

FOR ACTION/INFORMATION

ENVIRO

ASSIGNED AD:		ASSIGNED AD:
BRANCH CHIEF:	Ziemann	BRANCH CHIEF:
PROJECT MANAGER:		PROJECT MANAGER:
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INTERNAL DISTRIBUTION

REG. ELITE	SYSTEMS SAFETY	PLANT SYSTEMS	SITE SAFETY &
NRC PDR	HEINEMAN	TEDESCO	ENVIRO ANALYSIS
I & E	SCHROEDER	BENAROYA	DENTON & MULLER
OELD		LAINAS	
GOSSICK & STAFF	ENGINEERING	IPPOLITO	ENVIRO TECH.
MIPC	MACCARRY	KIRKWOOD	ERNST
CASE	KNIGHT		BALLARD
HANAUER	SIHWEIL	OPERATING REACTORS	SPANGLER
HARLESS	PAWLICKI	STELLO	
			SITE TECH.
PROJECT MANAGEMENT	REACTOR SAFETY	OPERATING TECH.	GAMMILL
BOYD	ROSS	EISENHUT	STAPP
P. COLLINS	NOVAK	SHAO	HULMAN
HOUSTON	ROSZTOCZY	BAER	
PETERSON	CHECK	BUTLER	SITE ANALYSIS
MELTZ		GRIMES	VOLLMER
HELTENES	AT & I		BUNCH
SKOVHOLT	SALTZMAN		J. COLLINS
	RUTBERG		KREGER

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CONTROL NUMBER

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TIC:	REG. VIE	ULRIKSON (ORNL)	
NSIC:	LA PDR		
ASLB:	CONSULTANTS		
ACRS CYS HOLDING/SENT			

7442

INDIANA & MICHIGAN POWER COMPANY

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

Regulatory

File 94



July 20, 1976

Donald C. Cook Nuclear Plant
Docket No. 50-315
DPR No. 58

Mr. Benard Rusche, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Rusche:

In accordance with the requirements of 10 CFR 50.90, Indiana & Michigan Electric Company and Indiana & Michigan Power Company (Licensees) hereby request that the operating license of the Donald C. Cook Nuclear Plant Unit No. 1 (License No. DPR-58) be amended to permit operation at steady state core power levels not in excess of 3250 megawatts thermal (100 percent of rated thermal power) for Cycle 2. This cycle will begin after the first refueling in which approximately sixty-five (65) assemblies will be discharged from the core and replaced with fuel assemblies designed and manufactured by the Exxon Nuclear Company. It is currently planned to terminate Unit 1, Cycle 1 operation about the end of the year for the purpose of reloading the core and performing other maintenance and surveillance work. Based on this, we would expect to return to criticality and commence Cycle 2 operation by February 1977. The plant has operated since initial criticality on January 18, 1975 with 193 fuel assemblies designed and fabricated by Westinghouse Electric Corporation.

The Donald C. Cook Nuclear Plant Unit No. 1 is currently operating under the provisions of License No. DPR-58, as amended, at steady state reactor core power levels not in excess of 3250 megawatts thermal (100 percent of rated power). The operation at 100 percent power level was authorized by Amendment No. 14 to Facility Operating License DPR-58 issued by the Commission on May 28, 1976. This authorization is effective

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1. The first part of the document is a list of names and addresses. The names are listed in the first column, and the addresses are listed in the second column. The names are: John Doe, Jane Smith, and Bob Johnson. The addresses are: 123 Main St, 456 Elm St, and 789 Oak St.

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July 20, 1976

only until such time as the reactor is next refueled at which time, unless the Commission has taken further licensing action with respect to the authorized power level, the authorized power level will be 2632.5 megawatts thermal (81 percent of rated power).

This restriction on maximum operating power after the first cycle, until the Commission has taken further licensing action, was made by the Nuclear Regulatory Commission in accordance with the advice of the Advisory Committee on Reactor Safeguards (henceforth referred to as "ACRS") in the March 11, 1976 letter from Dade W. Moeller, ACRS Chairman, to Honorable William A. Anders, Chairman of the U.S. Nuclear Regulatory Commission.

The ACRS expressed a desire to be kept informed with regard to the inventory of ice in the ice condenser, as measured by the quarterly sampling program which has continued. Periodic results of the ice condenser basket weighing and surveillance program have been forwarded to the NRC. A formal report of the results of the January and April 1976 ice weighings will be submitted to the NRC by the end of July 1976. Another ice weighing was conducted during a July 1976 outage and an analysis of the results will be submitted by October 4, 1976.

Since authorization to increase power levels above 81% was received on March 30, 1976, we have continued our operating philosophy of employing frequent in-core flux mapping to determine actual peaking factors at power levels above 81% up to and including 100% operation. The results continue to be favorable. Performance of the Axial Power Distribution Monitoring System in this period has yielded similar results.

Specific information on maximum allowable nuclear peaking factor (F_Q) during Cycle 2 operation will be submitted as a part of this amendment request by October 18, 1976.

Licensees and Exxon Nuclear Company are developing technical information concerning the reload core in conformance with the NRC Staff's proposed "Guidance for Proposed License Amendments Relating to Refueling" of June 1975. The technical information includes a general description of the reload core, detailed mechanical data on the reload fuel, specifics of the

July 20, 1976

nuclear design, specifics of the thermal hydraulic design, and the accident and transient analyses.

In support of this request for an amendment to License DPR-58, Exxon Nuclear Company is transmitting directly to the NRC, under separate cover of a letter dated July 19, 1976, 40 copies of a report prepared by Exxon Nuclear Company (Report No. XN-76-25, "Donald C. Cook Nuclear Plant Unit 1 Cycle 2 Reload Fuel Licensing Data Submittal"). This report includes technical information on the Cycle 2 reload in the areas of mechanical design, thermal hydraulic design, neutronics, operational summary of Cycle 1 as it pertains to the Cycle 2 reload and the startup testing program for Cycle 2.

The remainder of the technical information will be submitted to the Commission on the following approximate schedule:

Description of ECCS Model Update	July 31, 1976
Results of January & April ice weights	July 31, 1976
Safety and Plant Transient Analysis, Including ECCS Example Problem	August 20, 1976
Proposed Technical Specification Changes (excluding ECCS-related)	September 15, 1976
Results of July, 1976 Ice Condenser Weighing	October 4, 1976
ECCS Analysis and Related Technical Specification Changes	October 18, 1976

The ECCS analysis for Cycle 2 operation to demonstrate conformance to 10 CFR 50.46 and Appendix K will use the WREM computer model as modified by Exxon Nuclear Company for application to the Donald C. Cook Nuclear Plant, Unit No. 1.

We specifically are requesting the following change to Facility Operating License No. DPR-58, Section 2.C(1) to read:



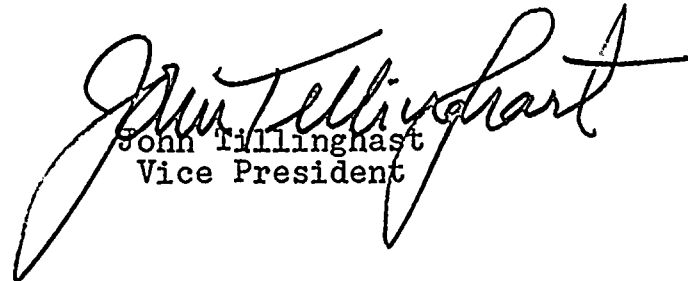
July 20, 1976

"Maximum Power Level

The licensees are authorized to operate the Donald C. Cook Nuclear Plant, Unit 1, at steady state reactor core power levels not to exceed 3250 megawatts thermal (100 percent of rated power)".

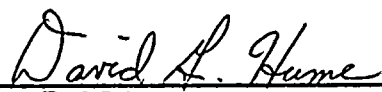
We would appreciate your review of this reload application to permit startup of Cycle 2 by February, 1977.

Very truly yours,


John Tillinghast
Vice President

JT:mam

Sworn and subscribed to before me
this 20th day of July 1976
in New York County, New York



Notary Public

cc: G. Charnoff
R. J. Vollen
R. C. Callen
P. W. Steketee
R. Walsh
R. S. Hunter
R. W. Jurgensen - Bridgman

DAVID G. HUME
NOTARY PUBLIC, State of New York
No. 31-4608113
Qualified in New York County
Commission Expires March 30, 1977



4-11-68

1. The first part of the report discusses the general situation of the project and the progress made during the last year. It also mentions the various problems encountered and the measures taken to solve them.

2. The second part of the report deals with the results of the experiments conducted during the last year.

3. The third part of the report describes the theoretical work done during the last year. It includes a detailed discussion of the various models proposed and the results of the calculations.

4. The fourth part of the report discusses the conclusions drawn from the work done during the last year.

5. The fifth part of the report contains a list of references.

6. The sixth part of the report contains a list of figures.

JUL 19 1976

Docket No. 50-315

Indiana & Michigan Electric Company
Indiana & Michigan Power Company
ATTN: Mr. J. A. Tillinghast
Vice President
P. O. Box 18
Bowling Green Station
New York, New York 10004

Gentlemen:

RE: DONALD C. COOK NUCLEAR STATION UNIT NO. 1

10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," was published February 14, 1973. Since many nuclear plants had either received an operating license or their containments had reached advanced stages of design or construction at that time, some plants may not now be in full compliance with the requirements of this regulation.

You are requested to determine if you are conducting containment leakage testing in full compliance with Appendix J. This determination should include the identification of any design features that do not permit conformance with its requirements or existing technical specification requirements which are in conflict with Appendix J, (i.e., less restrictive than). It should be understood that while a containment leakage testing program may be in compliance with the technical specifications for your facility, the program may not be in conformance with Appendix J.

If you are not in full compliance, you should identify your planned actions and schedule to attain conformance to the Regulations. Possible courses of action include design modifications, amendments to the technical specifications, and requests for exemption pursuant to 10 CFR Part 50, Section 50.12.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

1. The purpose of this document is to provide information regarding the activities of the [redacted] in the [redacted] area.

2. The [redacted] has been observed in the [redacted] area, and it is believed that it is engaged in [redacted] activities.

3. The [redacted] is believed to be a [redacted] organization, and it is believed that it is engaged in [redacted] activities.

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Indiana & Michigan Electric Company
Indiana & Michigan Power Company

- 2 -

JUL 19 1976

Please submit the results of your study to us as soon as possible but no later than 30 days from receipt of this letter.

This request for generic information was approved by GAO under a blanket clearance number B-180225 (R0072); this clearance expires July 31, 1977.

Sincerely,

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosure:
Appendix J

cc w/enclosure:
See next page

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MFairtile
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MGrotenhuis

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SURNAME ➤	MFletcher	MFairtile	DLZiemann			
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4. *Chlorophyll a* and *Chlorophyll b* contents were determined by the method of Lichtenthal and Whistler (1987). The total chlorophyll content was determined by the method of Arar and Manta (1980).

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Indiana & Michigan Electric Company
Indiana & Michigan Power Company

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cc w/enclosure:
Mr. Robert Hunter
Vice President
American Electric Power Service
Corporation
2 Broadway
New York, New York 10004

Gerald Charnoff
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Trowbridge
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Washington, D. C. 20036

Businessmen for the Public Interest
Suite 1001
109 North Dearborn Street
Chicago, Illinois 60604

