UNITED STATES
NUCLEAR REGULATORY COMMISSION
~~ATOMIC ENERGY COMMISSION~~
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

A. RO Inspection Report No. _____

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C. Incident Notification From: Indian & Michigan Elec. Co., Docket No. 50-315
(Licensee & Docket No. (or License No.)

Transmittal Date : FEB 14 1975

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Ao
4

INDIANA & MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106

February 7, 1975

Mr. J.G. Keppler, Regional Director
Directorate of Regulatory Operations
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Operating License DPR-58
Docket No. 50-315
AEO/50-315/75-3

Dear Mr. Keppler:

This report is to inform you of an Abnormal Environmental Occurrence which occurred at the Donald C. Cook Nuclear Plant at approximately 1510 hours on February 6, 1975.

An unsampled release of a waste holdup tank was made in violation of Appendix "B" Technical Specifications 2.4.2.b and 2.2.3.3.

The South Waste Evaporator Condensate Tank was released to the discharge tunnel without having been sampled for radioactivity and boron concentration.

The radioactivity monitor (R-18) of the Radiation Monitoring System in the discharge line which was in operation did not reach the alarm point and the recorder trace indicated no radioactivity in the release. Estimated amount of radioactivity, based upon the history of prior planned releases and analysis of the source tank indicated a release of approximately 47 μCi tritium.

An investigation is still in progress to determine the cause of the error and action to prevent recurrence. However, initial indications are that an error in the written procedure caused the unplanned release.

Our conservative estimates indicate that the discharge was barely above the minimum detectable activities and below the allowable limits for boron discharges. Based upon these estimates, the health and safety of the public has not been affected.

The NRC Resident Inspector, Mr. K.R. Baker, was informed of this event by telephone at 2010 hours, February 6, 1975.

R.W. Jurgensen
Plant Manager

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 1550

FILE: INCIDENT REPORT

FROM:	DATE OF DOC	DATE REC'D	LTR	TWX	RPT	OTHER
American Electric Power New York, New York 10004 Mr. J.E. Dolan	2-3-75	2-11-75	X			

TO:	ORIG	CC	OTHER	
NRC	1 signed			SENT AEC PDR XXX SENT LOCAL PDR XXX

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXX			1	50-315/316

DESCRIPTION:

Ltr reporting an abnormal occurrence at the D.C. Cook facility....concerning a deficiency ...diode failures in the Engineered Safeguards System test circuitry.....

ENCLOSURES:

ACKNOWLEDGED

DO NOT REMOVE

PLANT NAME: D.C. Cook

FOR ACTION/INFORMATION 2-12-75 JB

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Regulatory Docket File

AMERICAN ELECTRIC POWER *Service Corporation*

AEP

2 Broadway, New York, N. Y. 10004
(212) 422-4800

JOHN E. DOLAN
Executive Vice President
Engineering & Construction

February 3, 1975

DOCKETED USAEC FEB 12 1975 REGULATORY MAIL SECTION DOCKET CLERK

Docket No. 50-315
and 50-316
CPPR No. 61
DPR No. 58

RECEIVED FEB 11 1975 U.S. ATOMIC ENERGY COMMISSION Regulatory Mail Section

U.S. Nuclear Regulatory Commission
Directorate of Regulatory Operations
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attention: Mr. James G. Keppler
Regional Director

Gentlemen:

Pursuant to the regulations of 10CFR50.55(e), we herewith submit this report concerning an equipment deficiency which occurred during construction at the Donald C. Cook Nuclear Plant, Bridgman, Michigan. Unit 1 is currently operating under AEC Operating License DPR-58 and Unit 2 is being constructed under AEC Construction Permit No. CPPR-61.

The equipment deficiency has been identified as diode failures in the Engineered Safeguards System test circuitry. This test circuitry is utilized to periodically verify the continuity of relay coils which are required for the proper operation of the Engineered Safeguards System.

The subject diodes are used for the sole purpose of protecting certain indicating lamps in the Engineered Safeguard System test circuitry from surge voltages generated when associated relays in this system are reset (de-energized). Such a relay reset would occur after these Engineered Safeguards System relays have been energized in the performance test. Diodes associated with these relays failed during initial performance testing of the system at which time detection of the failure occurred.

FEB 7 1975

1550

An investigation into the deficiency has determined that the peak reverse voltage rating of these particular diodes is insufficient to withstand the surge voltages generated during Engineered Safeguards System Relay de-energization. This resulted in diode failures and subsequent damage to Engineered Safeguards System circuitry.

Had the diode failure occurred undetected during plant operation, and had the Engineered Safeguards System been called upon to operate during the time interval that the failure remained undetected, proper operation of certain functions of the Engineered Safeguards System may have been prevented. However, the indications of this failure during the initial performance testing were clear and immediately discernable to both test and operations personnel. Therefore, due to the comprehensive testing program carried out on this equipment prior to plant startup, no possibility existed for placement of the subject Engineered Safeguards System test circuitry in service with this diode deficiency remaining undetected.

To prevent future damage, all diodes in the Engineered Safeguards System Test circuitry subject to failure by this mechanism have been removed and replaced with varistors with the appropriate voltage characteristics. All Engineered Safeguard circuitry, including any circuitry with the above modification, has been tested. All circuitry now operates within required specifications and no varistor failures have been experienced under repeated operation.

Very truly yours,

John E. Dolan

John E. Dolan
Executive Vice President
Engineering & Construction

JED:ma

cc: Gerald Charnoff, Esq.
R. C. Callen, Esq.
R. J. Vollen, Esq.
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