

# INDIANA & MICHIGAN ELECTRIC COMPANY

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

February 24, 1982  
AEP:NRC:0308Q

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2  
Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74  
Submission of Scenario for March 30, 1982 Exercise

Mr. James G. Keppler, Regional Director  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region III  
Glen Ellyn, Illinois 60137

PRINCIPAL STAFF			
DIR		EGIS	
D/D		PAO	
A/D			
DRAFT	NAS		
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Dear Mr. Keppler:

Attached is a detailed description of the scenario for the March 30, 1982 Exercise. This description is being submitted in accordance with our letter No. AEP:NRC:03080, dated February 4, 1982.

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



Very truly yours,

*[Signature]*  
R. S. Hunter  
Vice President

RSH/sag

cc: w/o Attachment

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ATTACHMENT TO AEP:NRC:0308Q

INDIANA & MICHIGAN ELECTRIC COMPANY  
DONALD C. COOK NUCLEAR PLANT

DETAILED DESCRIPTION OF MARCH 30, 1982 EXERCISE SCENARIO

INITIAL CONDITION:

Both Units at 100% power. The east centrifugal charging pump in Unit 1 is out of service for maintenance. The reciprocating charging pump on Unit 1 is also out of service for maintenance.

SCENARIO:

At 8:00 a.m. the Maintenance Department reports to the Control Room that there is a fire in the east centrifugal pump enclosure and that two maintenance men have been injured. The fire is extinguished. As cleanup progresses, the valve on an oxygen bottle breaks off and the bottle strikes the west centrifugal charging pump motor. The west centrifugal charging pump flow begins to fluctuate. The seal injection flow to the reactor coolant pumps also begins to fluctuate. Approximately one hour into the drill the west centrifugal charging pump automatically trips. Automatic isolation of letdown flow occurs. The operator trips the reactor. Some control rods indicate as not being fully inserted. Reactor coolant system pressure, temperature and pressurizer level are slowly decreasing. Leakoff from the No. 1 seals of the reactor coolant pumps is going to the Volume Control tank.

A few minutes after the west centrifugal charging pump trips, a rupture occurs in the No. 1 main steam line outside the containment. Reactor coolant pressure, temperature and pressurizer level decrease rapidly. There is no safety injection flow delivery to the core because both centrifugal charging pumps are inoperable. Safety injection flow is established when the reactor coolant system depressurizes to below the safety injection pump shutoff head; the reactor coolant pumps are tripped as pressure continues to decrease. Steam Generator No. 1 boils dry.

At approximately two hours into the drill, a bubble is drawn in the pressurizer and the pressurizer is heated up to obtain approximately 50° subcooling margin.

One reactor coolant pump is started to go into a forced circulation cooldown.

At approximately three hours into the drill, the reactor coolant system reaches the residual heat removal system actuation setpoint. The

residual heat removal system is placed into service. One residual heat removal pump operates erratically and trips on overload. The Auxiliary Building radiation area monitors alarm and the Unit vent radiation monitor alarms high and is increasing. Reactor coolant system pressurizer level and pressure are decreasing, which indicates that a loss of coolant accident has occurred in the Auxiliary Building. The loss of coolant accident is isolated after several minutes. Radiation dose rates will be at a level sufficient to require a General Emergency to be declared.

Reactor coolant system cooldown continues. Long term recovery actions commence.

The drill is expected to begin at approximately 8:00 a.m. and continue to approximately 3:30 p.m. with a one hour break for lunch at approximately 11:00 a.m.