



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

December 16, 1980

Those on Attached List:

The enclosed IE Information Notice No. 80-46 provides early notification of an event that may have safety significance. Accordingly, you should review the Information Notice for possible applicability to your facility.

No specific action or response is requested at this time; however, contingent upon the results of further staff evaluation, a Bulletin or Circular recommending or requesting specific licensee actions may be issued. If you have any questions regarding this matter, please contact this office.

Sincerely,

*James G. Keppler*  
for James G. Keppler  
Director

Enclosure: IE Information  
Notice No. 80-44

8101070 074

Q

Docket No. 50-346

Toledo Edison Company  
ATTN: Mr. Richard P. Crouse  
Vice President  
Nuclear  
Edison Plaza  
300 Madison Avenue  
Toledo, OH 43652

cc w/encl:

T. D. Murray, Station  
Superintendent

Central Files

AD/Licensing

AD/Operating Reactors

AEOD

Resident Inspector, RIII

PDR

Loca' PDR

NSIC

Harold W. Kohn, Power  
Siting Commission

Helen W. Evans, State of Ohio

RECEIVED DISTRIBUTION  
SERVICES UNIT

1990 DEC 18 PM 12 07

RECEIVED  
SERVICES UNIT

DUPLICATE

SSINS No.: 6835  
Accession No.:  
8012160001  
IN 80-44

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, D.C. 20555

December 15, 1980

IE INFORMATION NOTICE NO. 80-44: ACTUATION OF ECCS IN THE RECIRCULATION  
MODE WHILE IN HOT SHUTDOWN

PURPOSE:

The intent of this Information Notice is to alert PWR licensees and holders of construction permits of a potentially generic problem involving inadvertent actuation of the emergency core cooling system (ECCS) in the "Recirculation Mode". Such an event occurred at the Davis-Besse Nuclear Power Station (Docket No. 50-346) on December 5, 1980. The plant was in a hot shutdown mode of operation at the time of the event and was undergoing certain maintenance activities as described below.

DISCUSSION:

Just prior to the inadvertent actuation of the ECCS, the licensee was attempting to isolate electrical shorts and/or grounds in the Safety Features Actuation System (SFAS). Towards this end, A-C power had been removed from Channel 3 of the SFAS. Upon reenergizing Channel 3 it was noted that an indicating lamp was out; therefore, an attempt was made to replace the failed lamp with a spare unit. While removing a lamp from a spare output slot in a Channel 3 chassis, an arc was drawn between the lamp and the module chassis. This arcing was apparently due to a combination of shorts or grounds in the SFAS, which coupled with the "common" connection between Channel 1 and 3 resulted in the loss of a power supply in Channel 1. Since all the bistable trips in Channel 3 had not been completely reset, and since a power supply to Channel 1 was lost, SFAS Levels 1, 2, 3 and 5 were actuated by the two-out-of-four actuation logic. Since SFAS Level 5 indicates that the Borated Water Storage Tank (BWST) is at a low level, the ECCS was placed in a recirculation mode (i.e., the ECCS suction was aligned to the emergency containment sump.)

In order to place the ECCS system in the recirculation mode, the supply valves leading to the Decay Heat Removal (DHR) pumps from the BWST start closing after those in the ECCS line and from the containment emergency sump fully open. Thus, during this valve transition period, a flow path existed to the reactor coolant system (RCS) via the BWST and the ECCS pumping system (i.e., the DHR pumps); however, since the RCS pressure was higher than that of the pumping system (2100 vs. 1600 psig) no BWST water was pumped into the RCS. Rather, during the valve transition time of about 1-1/2 minutes, approximately 15,000 gallons of borated water was drained from the BWST to the containment emergency sump.