



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

TH

March 7, 1980

Docket No. 50-293

Boston Edison Company M/C Nuclear
ATTN: Mr. G. Carl Andognini, Manager
Nuclear Operations Department
800 Boylston Street
Boston, Massachusetts 02199

Gentlemen:

This Information Notice is provided as an early notification of a possibly significant matter. It is expected that recipients will distribute this Notice to their operating personnel and will review the information for possible applicability to their facilities. No specific response is requested at this time. However, we anticipate that further NRC evaluations will result in issuance of an Addendum to IE Bulletin 79-27 in the near future which will recommend or request specific applicant or licensee actions. If you have questions regarding the matter, please contact the Director of the NRC Region I office.

Sincerely,

James M. Allan
JHG Boyce H. Grier
Director

Enclosures:

1. IE Information Notice No. 80-10 with Enclosure
2. List of Recently Issued IE Information Notices

Contact: R. A. Feil
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cc w/encls:

P. J. McGuire, Pilgrim Station Manager

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

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March 7, 1980

IE Information Notice No. 80-10

PARTIAL LOSS OF NON-NUCLEAR INSTRUMENT SYSTEM POWER SUPPLY DURING OPERATION

Description of Circumstances:

This notice contains information regarding Crystal River Unit-3 response to a loss of non-nuclear instrumentation (NNI) as a consequence of loss of the +24 volt power supply to the NNI.

At 2:23 p.m. on February 26 with Crystal River Unit-3 at 100% power, the +24 volt power supply to the NNI was lost, due to a short to ground. This initiated a sequence of events (detailed in the enclosure) wherein the PORV opened and stayed open as a direct result of the NNI power supply loss. HPI initiated as a result of depressurization through the open PORV, and with approximately 70% of NNI inoperable or inaccurate, the operator correctly decided that there was insufficient information available to justify terminating HPI. Therefore, the pressurizer was pumped solid, one safety valve lifted, and flow through the safety valve was sufficient to rupture the RC Drain Tank rupture disk, spilling approximately forty-three thousand gallons of primary water into containment.

The Crystal River-3 event is closely related to the November 10, 1979 event at Oconee Unit-3 wherein the inverter supplying power to the Integrated Control System (ICS) and to parts of the NNI failed. That event was the subject of IE Information Notice 79-29 (November 16, 1979) which was followed by IE Bulletin 79-27 (November 30, 1979).

The CR-3 event involved loss of only part of the power available from an inverter, rather than the inverter itself, since the +24v supply is only one of several power supplies drawing power from one inverter. The effects are very similar, however, in that the ICS lost part of its input signals in both events.

The +24 volt power supply short to ground has tentatively been identified by the licensee to have occurred between knife edge connectors of a Bailey Control Company Voltage Buffer Card. The voltage buffer card was misaligned in its receptacle, and adjacent connectors carrying +24v and "common" were bent such that they contacted one another. This subsequent re-energizing of the power printed circuit card. Subsequent re-energizing of the power printed circuit card which was also misaligned. The specific circuit cards which were replaced. The connectors on these cards are slightly different angle than those found on similar cards. The connectors carry part numbers 6624608A1 or 6624608A2. The licensee is more subject to misalignment.

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