

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, DC 20555

March 1, 1985

IE INFORMATION NOTICE NO. 85-17: POSSIBLE STICKING OF ASCO SOLENOID VALVES

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or construction permit (CP).

Purpose:

This notice is provided to inform recipients of a potential problem with ASCO solenoid valves that may prevent the main steam isolation valves (MSIVs) from closing on BWRs and may prevent other safety functions on BWRs or other types of plants. It is expected that recipients will review the information for applicability to their facilities and consider actions, if appropriate, to preclude a similar problem occurring at their facilities. However, suggestions contained in this information notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

On February 10, 1985, at Grand Gulf Unit 1, one inboard and two outboard MSIVs failed to remain shut following manual closure. The problem is now attributed to failure of the ASCO solenoid valves used to provide fast closure of the MSIVs in the event of an accident.

At the time of the event, the plant was using a slow-closure procedure to close the MSIVs prior to a drywell entry following a reactor scram. The procedure calls for one set of solenoid valves to slowly close the MSIVs and another set of solenoid valves, which are the fast closure solenoid valves used in an accident, to hold the MSIVs closed. Evaluations and tests performed subsequent to the event have attributed the problem to the second set of solenoid valves (type HTX 8323-20V). Each of these solenoid valves contains two solenoids, one solenoid rated at 16 watts and the other solenoid rated at 6 watts.


Preliminary test results, to date, have reproduced spurious sticking of the solenoid actuator of the solenoid valve when the solenoids are subjected to temperatures of about 180°F. However, these tests have not been definitive.

Discussion:

Although the NRC is not aware of all applications of this type of dual solenoid valve in all types of plants, a list provided by General Electric of BWRs that are believed to use this valve for closing the MSIVs includes:

Brunswick 1 & 2
Clinton
Cooper
Duane Arnold
Fitzpatrick
Grand Gulf 1 & 2
Hatch 2
LaSalle 1 & 2
Shoreham

No specific action or written response is required by this information notice. If you need additional information about this matter, please contact the Regional Administrator of the appropriate NRC regional office or the technical contact listed below.


Edward L. Jordan, Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Technical Contact: Eric W. Weiss, IE
(301) 492-9005

Attachment: List of Recently Issued IE Information Notices

LIST OF RECENTLY ISSUED
 IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
85-16	Time/Current Trip Curve Discrepancy Of ITE/Siemens-Allis Molded Case Circuit Breaker	2/27/85	All power reactor facilities holding an OL or CP
85-15	Nonconforming Structural Steel For Safety-Related Use	2/22/85	All power reactor facilities holding an OL or CP
85-14	Failure Of A Heavy Control Rod (B4C) Drive Assembly To Insert On A Trip Signal	2/22/85	All power reactor facilities holding an OL or CP
85-13	Consequences Of Using Soluble Dams	2/21/85	All BWR and PWR facilities holding an OL or CP
85-12	Recent Fuel Handling Events	2/11/85	All power reactor facilities holding an OL or CP
85-11	Licensee Programs For Inspection Of Electrical Raceway And Cable Installation	2/11/85	All power reactor facilities holding a CP
85-10	Posttensioned Containment Tendon Anchor Head Failure	2/6/85	All power reactor facilities holding an OL or CP
85-09	Isolation Transfer Switches And Post-Fire Shutdown Capability	1/31/85	All power reactor facilities holding an OL or CP
85-08	Industry Experience On Certain Materials Used In Safety-Related Equipment	1/30/85	All power reactor facilities holding an OL or CP
85-07	Contaminated Radiography Source Shipments	1/29/85	All NRC licensees authorized to possess industrial radiography sources

OL = Operating License
 CP = Construction Permit