SSINS No.: 6835
IN 85-27

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

April 3, 1985

IE INFORMATION NOTICE NO. 85-27: NOTIFICATIONS TO THE NRC OPERATIONS CENTER AND REPORTING EVENTS IN LICENSEE EVENT REPORTS

Addressees:

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

Purpose:

This notice is provided to clarify the requirement for licensees to report to the Headquarters Operations Center an event or condition that results in or could result in multiple failures in safety systems. This guidance is also applicable to the requirement for licensees to report events as Licensee Event Reports (LERs). It is expected that recipients will review the information for applicability to their facilities and take appropriate action. No specific action or response is required by this notice.

Description of Circumstances:

This issue has arisen as a result of a recent event at a nuclear power plant during which multiple failures occurred in the scram system, but the licensee did not consider it necessary to report the failures to the Headquarters Operations Center.

The event occurred while performing single control rod scram time testing. One of the control rods scheduled for testing failed to scram when the scram pilot solenoid valve stuck in the energized position. Subsequent testing of the remaining rods revealed that 3 additional rods would not scram and that 11 control rods exhibited initial hesitation. The unit was operating at power when the problems occurred.

Discussion:

The paragraph of 10 CFR 50.72 that requires reporting of all multiple failures and some single failures is paragraph 50.72(b)(2)(iii), which requires the licensee to notify the NRC Operations Center as soon as practical and in all cases within 4 hours of the occurrence of:

> Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to:
>
> (a) Shut down the reactor and maintain it in a safe shutdown condition,
> (b) Remove residual heat,
> (c) Control the release of radioactive material, or
> (d) Mitigate the consequences of an accident.

10 CFR 50.73(a)(2)(v) also contains words identical to the preceding excerpt. Multiple failures of redundant components required to perform any of the above safety functions are reportable. A single failure in a component required to perform any of the above safety functions is reportable when there is sufficient reason to expect that the failure mechanism is one that could occur in a redundant component.

Multiple failures of redundant components of a safety system are sufficient reason to expect that the failure mechanism, even though not known, could prevent the fulfillment of the safety function. While the failure of a single rod to scram may not cause a reasonable doubt that other rods would fail to scram, the failure of multiple rods to scram causes a reasonable doubt that other rods could be affected and, thus, this is an event or condition that could prevent the fulfillment of the safety function (i.e., the RPS scram) needed to shut down the reactor.

A single failure in a safety system is reportable when it is determined that the failure mechanism could reasonably be expected to occur in a redundant component or components of a safety system such that the fulfillment of the safety function would be prevented. The preamble to the Federal Register Notices that published the 10 CFR 50.72 and 10 CFR 50.73 rules provide as an example:

> ...if a pump fails because of improper lubrication, there is a reasonable expectation that the functionally redundant pump, which was also improperly lubricated, would have also failed before it completed its safety function, then the failure is reportable and the potential failure of the functionally redundant pump must be reported.

Such a single failure is reportable to the NRC Operations Center as soon as practical and in all cases within 4 hours of determining that the failure mechanism could reasonably be expected to occur in a redundant component or components of a safety system. Similarly such a single failure is reportable in a Licensee Event Report within 30 days of determining that the failure mechanism could reasonably be expected to occur in a redundant component or components of a safety system.

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

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

Technical Contacts: 10 CFR 50.72
E. W. Weiss, IE
(301) 492-9005

10 CFR 50.73
F. J. Hebdon, AEOD
(301) 492-4480

Attachment: List of Recently Issued IE Information Notices

Attachment 1
IN 85-27
April 3, 1985

LIST OF RECENTLY ISSUED
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
85-26	Vacuum Relief System For Boiling Water Reactor Mark I And Mark II Containments	4/2/85	All BWR facilities having a Mark I or Mark II containment and holding an OL or CP
85-25	Consideration Of Thermal Conditions In The Design And Installation Of Supports For Diesel Generator Exhaust Silencers	4/2/85	All power reactor facilities holding an OL or CP
85-24	Failures Of Protective Coatings In Pipes And Heat Exchangers	3/26/85	All power reactor facilities holding an OL or CP
85-23	Inadequate Surveillance And Postmaintenance And Post-modification System Testing	3/22/85	All power reactor facilities holding an OL or CP
85-22	Failure Of Limitorque Motor-Operated Valves Resulting From Incorrect Installation Of Pinon Gear	3/21/85	All power reactor facilities holding an OL or CP
85-21	Main Steam Isolation Valve Closure Logic	3/18/85	All PWR facilities holding an OL or CP
85-20	Motor-Operated Valve Failures Due To Hammering Effect	3/12/85	All power reactor facilities holding an OL or CP
85-19	Alleged Falsification Of Certifications And Alteration Of Markings On Piping, Valves And Fittings	3/11/85	All power reactor facilities holding an OL or CP
85-10 Sup. 1	Posstensioned Containment Tendon Anchor Head Failure	3/8/85	All power reactor facilities holding an OL or CP

OL = Operating License
CP = Construction Permit