

GENERAL ELECTRIC

NUCLEAR POWER SYSTEMS DIVISION

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U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Washington, D.C. 20555

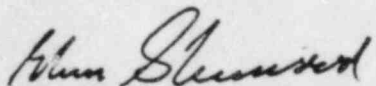
Attention: Richard C. DeYoung

SUBJECT: 10CFR PART 21, REPORTABLE CONDITION
ANCHOR-DARLING VALVE

This letter is to inform the NRC of a reportable defect per 10CFR Part 21, as reported to C. E. Rossi of your office by G. B. Stramback, Manager of Safety Evaluation Programs on December 16, 1983.

The defect is the loosening of the anti-rotational setscrew in Anchor Darling Globe valves. This defect has been previously identified in IE Information Notice 83-70, "Vibration Induced Valve Failure." The affected BWR plants have been notified of this condition. The attached reportable condition report identifies all pertinent information required by 10CFR Part 21.

Very truly yours,



Glenn G. Sherwood, Manager
Nuclear Safety and Licensing Operation

GGs:pab/B12152

Attachment

cc: L. S. Gifford, GE-Bethesda
T. E. Murley, NRC Region I
J. P. O'Reilly, NRC Region II
J. G. Keppler, NRC Region III
U. Potapovs, NRC Region IV
J. B. Martin, NRC Region V
R. C. DeYoung, NRC (2 extra copies)

COMPANY PRIVATE
REPORTABLE CONDITION

1. Name and address of the individual or individuals informing the Commission.

Dr. G. G. Sherwood, Manager of Nuclear Safety & Licensing Operation,
General Electric Company, 175 Curtner Avenue, San Jose, CA 95125

2. Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contain a defect.

HPCS test return valves (E22-F010/F011) using Anchor Darling Globe valves with anti-rotational devices.

3. Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

General Electric Company Nuclear Energy Business Operation, San Jose, California

4. Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

The set screw holding the stem collar in position on the valve stem vibrates loose which allows the key between the stem and stem collar to be displaced. This displaced key allows the stem collar to slide down the stem resulting in the free rotation at the stem rendering the valve inoperable. The loss of the stem collar set screws on both HPCS test return valves would represent a common mode failure. These valves, normally closed upon completion of a test, could remain open without the awareness of the Control Room operator. It can be postulated that during a LOCA radioactive suppression pool water can enter the external to containment Condensate Storage Tank (CST) creating a substantial safety hazard. The radioactive suppression pool water would exceed 10CFR100 limits and would be hazardous to public safety.

5. The date on which the information of such defect or failure to comply was obtained.
6. In the case of a basic component which contains a defect or fails to comply, the number and location of all such components in use at, supplied for, or being supplied for one or more facilities or activities subject to the regulations in this part.

Plants under construction as well as operating plants using Anchor Darling valves with anti-rotational devices in safety systems such as HPCS, RHR, RCIC. All BWR/5s and BWR/6s utilize this valve. This condition was reported by Zimmer and Limerick Nuclear Power Stations. Since A/D is a major supplier to the nuclear industry PWRs may also be affected.

7. The corrective action which has been, is being, or will be taken, the name of the individual or organization responsible for the action, and the length of time that has been or will be taken to complete the action.

The A/D engineering recommended corrective action to assure valve operability, is to lock the set screw(s) in place using one of the following methods: a) stake the stem collar threads, b) apply a nuclear grade thread locking compound to the set screw threads. The recommended compound is the "Loctite" pipe sealant No. 580. The amount of this compound when applied is only one or two drops.

8. Any advise related to the effect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

NRC has published IE Information Notice No. 83-70, "Vibration Induced Valve Failures."