

JAN 11 1983

MEMORANDUM FOR: William J. Dircks
Executive Director for Operations

FROM: Victor Stello, Jr., Chairman
Committee to Review Generic Requirements

SUBJECT: MINUTES OF CRGR MEETING NUMBER 28

The Committee to Review Generic Requirements met on Tuesday, December 21, 1982 from 2-6 p.m. in Room 6507 MNBB. A list of attendees is enclosed.

1. W. Mills (IE) briefed the Committee on current IE activities to address check valve failures. Although the impetus for these activities arose from a concern about check valve failures in diesel generator raw cooling water systems, a cursory review of operating experience and licensee events reports (LERs) has shown numerous check valve failures in other systems important to safety. This review also has shown that check valves in some systems important to safety are not covered by the inservice testing (IST) program and, further, that some inservice testing may not detect valve failures.

In order to address these concerns, IE plans the following generic actions:

- (a) Preparing and issuing an IE bulletin to address only check valve failures in diesel generator raw cooling water systems. The bulletin would request licensees to:
 - ° Include check valves in the IST program.
 - ° Improve the test and surveillance methods to detect check valve failures.
 - ° Schedule tests consistent with equipment and plant status.
 - ° Report the results of these actions to NRC.
- (b) Review bulletin responses and operating experience concerning check valve failures to determine the need for additional generic actions which might include:
 - ° Review and modification of IST programs to include additional check valves in systems important to safety and ensure that check valves in supporting systems are adequately addressed by IST.

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- ° Modification of IST programs for check valve testing to include a more conclusive test than a forward flow test.
- ° Modify IST programs for check valve testing to ensure that the frequency of testing is adequate to account for failures expected due to aging.

The Committee concluded that the actions planned by IE are appropriate. Mr. Mills indicated that the proposed bulletin would be forwarded for CRGR review after staff work has been completed.

2. W. Mills (IE) briefed the Committee regarding rulemaking activities on Notification of Significant Events (10 CFR 50.72), Licensee Event Reports (10 CFR 50.73), Construction Deficiency Reports (10 CFR 50.55e) and Reporting of Defects and Noncompliance (10 CFR 21).

The objectives of the rulemaking actions are to:

- ° Capture all events of safety significance in a timely manner while eliminating unnecessary reports, such as nonconsequential personnel injuries.
- ° Coordinate reporting with 10 CFR Part 50 Appendix E, Part 21, and sections 20.402, 403, 405, 10 CFR 73.71
- ° Combine in 10 CFR 50.72 "Unusual Events" and prompt reporting criteria previously in NUREG 0654.

The Committee suggested that the subject rulemaking action should address coordination of all NRC notification and reporting requirements concerning power reactors and should require no more than three notification/reporting intervals; e.g., 1 hour, 1 day and 30 days. Mr. Mills indicated that the proposed modifications to rules would be forwarded for CRGR review after staff work has been completed.

3. The CRGR met with representatives of NRR to further pursue questions regarding USI A-43, Containment Sump Performance. The CRGR, during Meeting No. 26, had questioned the potential for sump blockage due to paint removed from containment surfaces during a LOCA. The question of the potential for sump blockage due to paint removal and transport to the sumps was addressed in a memorandum from H. Denton to V. Stello dated December 16, 1982. The NRR position on the paint blockage issue was that:

- (a) Analyses indicate that there is not a basis for concern as a generic safety issue;
- (b) The issue will be further evaluated within established NRR procedures for treating proposed new generic issues, to determine the priority for further evaluation;

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- (c) The possible issue of paint removal therefore should not delay obtaining industry and public comment on the defined A-43 issue.

The CRGR accepted the NRR position on the paint blockage issue.

The CRGR addressed the level of risk reduction, or benefit, to be obtained from the analyses and potential modifications proposed to be required of the several licensees that might be found to have combined insulation/sump designs that could lead to failure of long-term recirculation cooling.

The Committee (as reflected in the minutes of CRGR Meeting No. 26, 11-24-82), has agreed with the forward fit aspects of the NRR proposed requirements. A revised SRP section 6.2.2 add a revised Regulatory Guide 1.82 would incorporate changes in design criteria that would provide greater assurance of sump performance, but would be imposed only on OL and CP applicants filing FSARs or PSARs at some time after the effective dates of the revised SRP section and the revised Regulatory Guide.

To support the proposed backfit requirements, NRR provided a generic value/impact assessment comprised of a probabilistic risk analysis of the effects of loss of sump function, and estimated costs of the backfit requirements proposed for licensees to reduce the risks of such loss. The probabilistic risk analyses resulted in an expected value of offsite public dose (person-rem) that could be averted from the estimated six to ten plants that are expected to need modifications. Key assumptions in this NRR analysis are:

- (a) The expected value of large LOCA (greater than 6" diameter pipe) incidence is 10^{-4} per reactor-year.
- (b) For those plants having sufficient fibrous insulation that could potentially result in sump blockage, it is assumed that 50 percent of all LOCAs in piping greater than 6" diameter will result in complete failure to pump any water from any containment sump.
- (c) The assumed failure of recirculation flow (from sump) is assumed to conditionally fail both reactor building spray and emergency core cooling, thereby leading to a core melt with containment failure by overpressure. No credit was given for potential beneficial operator action to prevent sump blockage by throttling the ECCS pump or to utilize alternate water sources and systems to prevent either core melt or loss of containment function. Thus, for the class of plants above, the NRR analysis assumed the core melt frequency for this LOCA sequence is 5×10^{-5} /RY.

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- (d) The offsite consequence model used to predict expected values of population dose assumed an average site, a 50-mile radius, and no evacuation of population during the accident.

An analysis by the DEDROGR staff indicated that each of the assumptions above was probably too conservative and that the NRR predicted value of averted public dose of about 65 person-rem per plant per year was too high by a factor of at least 100. If this were indeed the case, the proposed implementation plan actions would not appear to be justified. The CRGR recommended that NRR review their risk reduction analysis in light of the analysis performed by the DEDROGR staff with the objective of developing the most realistic assessment of averted radiological dose. NRR should then reaffirm or revise the proposed backfit actions, and discuss with CRGR again if they believe the cost benefit analysis justifies the proposed backfit actions.

Original signed by
Victor Stello

Victo. Stello, Jr., Chairman
Committee to Review Generic Requirements

Enclosure: List of
Attendees

cc: Commission (5)
CRGR Members
Office Directors
Regional Administrators
G. Cunningham

Distribution:
VStello
TEMurley
DEDROGR Staff
DEDROGR cf
Central File
PRD (NRG/CRGR)
SStern
FCameron
EFox
RErickson
FHebdon
WLittle (R-III)
JGagliardo (R-IV)
JZwetzig (R-V)
DGrimseley

*See attached for previous concurrences

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An analysis by the DEDROGR staff indicated that each of the assumptions above was probably too conservative and that the NRR predicted value of averted public dose of about 65 person-rem per plant per year was too high by a factor of at least 100. If this were indeed the case the cost/benefit estimates would be well in excess of \$1,000 per person-rem, and the proposed implementation plan actions would not appear to be justified. The CRGR recommended that NRR review their risk reduction analysis in light of the analysis performed by the DEDROGR staff with the objective of developing the most realistic assessment of averted radiological dose. NRR should then reaffirm or revise the proposed backfit actions, and discuss with CRGR again if they believe the cost benefit analysis justifies the proposed backfit actions.

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DGrimseley

OFFICE	DEDROGR/S	DEDROGR/D	DEDROGR			
SURNAME	WSchwink;bg	TEMurley	VStello			
DATE	1/4/83	1/4/83	1/ /83			