

JUL 1 5 1985

MEMORANDUM FOR: C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

FROM: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

SUBJECT: ABNORMAL OCCURRENCE REPORT TO CONGRESS
FOR SECOND QUARTER CY 1985

We have reviewed your memorandum of July 1, 1985, containing the first draft of proposed events to be included in the Second Quarter CY 1985 Abnormal Occurrence (AO) Report to Congress. As requested, we have prepared input (Enclosure 1) regarding the removal of the Boron Injection Tank in Westinghouse plants. Enclosure 2 contains the update input you requested regarding AO 77-9, Environmental Qualification of Safety Related Electrical Equipment Inside Containment. Enclosure 3 contains the information you requested regarding license suspension, orders and new generic safety issues.

We agree that the June 9, 1985 Total Loss of Feedwater event at Davis-Besse is reportable as an Abnormal Occurrence. We also agree with your proposal to defer input preparation until the ongoing staff evaluation is complete and their report is available.

Please contact G. Holahan of the Operating Reactors Assessment Branch if you have any questions.

original signed by:
Hugh L. Thompson, Jr.
Harold R. Denton, Director */for*
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc: P. Bobe

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REPORT
TO
CONGRESS*

ENCLOSURE 1

Removal of Boron Injection Tank in Westinghouse Plants

Boron Injection Tanks (BIT) were installed in Westinghouse plants as a measure to ensure that sufficient negative reactivity would be inserted during a steam line break event to compensate for the positive reactivity addition resulting from the rapid cooldown. This ensures complete reactor shutdown and thus, minimizes the potential for fuel failures. Over the past several years, the analysis methods for calculating the consequences of steam line break have improved. These revised calculations demonstrate that the negative reactivity that needs to be added to meet current requirements is lower than originally thought. Consequently the need for highly concentrated boron injection may be reduced or eliminated.

In light of operational problems and possible safety risks associated with the high BIT boron concentrations, and the improved calculations, many licensees with Westinghouse plants have requested that they be allowed to either physically remove the boron injection tank from the safety injection piping, or at least reduce boron concentrations in the tank to the levels safely used in other sections of the safety injection piping and refueling water storage tank (e.g., to 2000 ppm). To support their requests, licensees have submitted new analyses of the steam line break event that demonstrated the regulatory criteria (i.e., 10 CFR 100 guidelines dose values) were met. The staff has reviewed these analyses and has granted these requests. The plants which have received approval for removal of the BIT or changes to Technical Specification requirements on boron concentration in the BIT include: Turkey Point 3 and 4, Surry 1 and 2, Beaver Valley 1, McGuire 1 (unit 2 licensed without BIT), Catawba 1 and 2, Callaway 1, Farley 1 and 2, Trojan, South Texas and Harris (the latter two plants in licensing review).

In addition to the above licensing action, NRR is currently working on two initiatives which address the BIT issue generically. A generic letter to the appropriate licensees has been prepared which informs them of staff approval of the improved steam line break analysis methods and encourages them to reevaluate the need for maintaining high concentrations of boron in the BIT. The letter is presently undergoing final review prior to submittal to CRGR. In addition to this, a study has been initiated to determine whether or not a stronger position on the BIT removal issue is appropriate; i.e. whether higher boron concentrations in the BIT should be prohibited rather than simply discouraged. This study will also be used to identify the schedule and the appropriate level of resources to be allocated for resolution of this issue.

ENCLOSURE 2

UPDATING MATERIAL (APPENDIX B OF AO REPORT)

AO 77-9, ENVIRONMENTAL QUALIFICATION OF SAFETY-RELATED
ELECTRICAL EQUIPMENT INSIDE CONTAINMENT

77-9 Environmental Qualification of Safety-Related Electrical Equipment
Inside Containment

This abnormal occurrence was originally reported in NUREG-0090-10, "Report to Congress on Abnormal Occurrences: October - December 1977," and updated in subsequent reports in this series, i.e., NUREG-0090; Vol. 1, No. 1; Vol. 1, No. 2; Vol. 2, No. 2; Vol. 3, No. 2; Vol. 4, No. 2; and Vol. 5, No. 2. It is further updated as follows.

A new rule, "Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants," Section 50.49 to 10 CFR Part 50, was published in the Federal Register on January 21, 1983 and became effective on February 22, 1983. The scope of the rule covers electrical equipment important to safety as defined by the rule. This includes electrical equipment important to safety both inside and outside containment that would be subject to a harsh parameters and methods that an equipment qualification program should include. In addition, the rule specifies a deadline by which all electrical equipment covered by the scope of the rule should be qualified. This deadline is November 30, 1985.

Regulatory Guide 1.89, Revision 1 was issued in mid-1984. The Regulatory Guide clarifies the new rule and specifies acceptable methods for compliance with the rule.

Enforcement guidelines for environmental qualification deficiencies are now being developed. Since extensions beyond the November 30, 1985 deadline are not envisioned, future action on environmental qualification is expected to be in the enforcement realm.

Unless significant new information becomes available, this item is closed for purposes of this report.

ENCLOSURE 3

ADDITIONAL INFORMATION REQUESTED FROM NRR REGARDING LICENSE
SUSPENSIONS, ORDERS AND NEW SAFETY ISSUES

1) License Suspensions:

There have been no license suspensions for commercial nuclear power reactors during the second quarter CY 1985.

2) Orders Covering License Modifications for Safety Reasons:

No orders covering license modifications for safety reasons were issued during the second quarter CY 1985.

3) Identification of Those Generic Safety Concerns Approved by the Director of NRR:

There were no new generic issues approved by the Director of NRR in second quarter CY 1985.