



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 31, 1997

MEMORANDUM TO: Thomas P. Gwynn, Director
Division of Reactor Safety
Region IV

FROM: William H. Bateman, Director *William H. Bateman*
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

SUBJECT: RESPONSE TO TASK INTERFACE AGREEMENT (96-TIA-005) REGARDING
SEISMIC QUALIFICATION REQUIREMENTS FOR THE WNP-2 REACTOR
CORE ISOLATION COOLING (RCIC) SYSTEM (TAC NO. M96554)

You requested assistance from NRR on whether or not the RCIC system at WNP-2 was originally licensed to be a safety-related seismic Category I system, and whether or not the licensee's downgrading of the system in accordance with the provisions of 10 CFR 50.59 was acceptable. This issue was identified during an engineering and technical support team inspection conducted at WNP-2 in July 1996. The licensee had performed two modifications to the RCIC system without performing a seismic qualification analysis. The licensee had stated that the RCIC system had been downgraded from a safety-related to a nonsafety-related system in 1985 and also from a Seismic Category I system to a non-seismic system. The licensee stated that the supporting basis for this change was the 1985 modification to the automatic depressurization system which the licensee asserted now enveloped the safety function performed by RCIC. However, during the inspection, the inspectors found that Chapters 3, 5, and 7 of the Final Safety Analysis Report (FSAR) specified that the RCIC system components were Seismic Category I.

The inspectors noted that there had been no NRC correspondence with the licensee authorizing the downgrading of the RCIC system classification. The licensee was able to produce an internal NRC memo dated February 2, 1984, which stated that their RCIC system was outside the scope of equipment requiring environmental qualification and that the RCIC system could be removed from the Equipment Qualification Program. A copy of this memorandum was included in your request as was a copy of the licensee's March 22, 1984, amendment request to delete RCIC technical specification requirements and the NRC May 2, 1989, letter denying that request.

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Your request contained four questions related to whether or not the RCIC system classification should be downgraded for WNP-2. The NRR staff has reviewed the applicable documentation and concluded that the RCIC system for WNP-2 should be considered safety-related and, therefore, seismic Category I. The details of the staff's conclusions are attached.

Docket No. 50-397

Attachment: NRR Response

cc w/att: J. Wiggins, Region I
J. Jaudon, Region II
G. Grant, Region III
K. Perkins, Region IV WCFO

TIA 96TIA005 RESPONSEQuestion 1

Was the RCIC system originally designed to be safety-related and seismic Category I?

Yes. RCIC actuation was originally assumed in Section 15.2.7 (loss of all feedwater) of the plant's original FSAR which means that it is safety-related (the SRP states that equipment used to mitigate transients should be safety-related) and, therefore, seismic Category I.

Question 2

Was downgrading the RCIC system to non-safety related acceptable?

No. The Reactor Systems Branch issued a memo in 1981 from T. P. Speis (the RSB Branch Chief) to R. J. Bosnak (the Mechanical Engineering Branch Chief) discussing the safety classification of the RCIC system. This memo takes the position that RCIC should be considered safety-related because it is authorized (by technical specifications) as a replacement system for HPCS during a limited time when HPCS is inoperable. Therefore, plants are allowed to operate for a period of time if HPCS is inoperable. The memo concludes that "During this LCO, RCIC is considered part of [the] ECCS system replacing the HPCS system." We have found no document contradicting this memo and we still concur with its conclusions; therefore, RCIC should be considered a safety-related system. As a related note, SECY-93-067 "FINAL POLICY STATEMENT ON TECHNICAL SPECIFICATION IMPROVEMENTS," states that RCIC should be retained in the technical specifications because operating experience and PRA insights have demonstrated that it is important to safety.

A distinction needs to be drawn between the BWR/5 and BWR/6 series plants from the older BWR designs. BWR/5 and BWR/6 designs have a diesel driven HPCS pump whereas the older designs have a steam driven HPCI system. Therefore, in order to continue to cool the plant during a station blackout at a BWR/5 or BWR/6, RCIC operation is essential. As a result of this, additional emphasis needs to be placed on RCIC operation and it should be a safety-related system.

An NRC letter (Joe Williams (NRC) to O. D. Kingsley (TVA), April 11, 1995) stated that the staff had no objection to TVA's decision to lower the safety classification of RCIC from safety-related. The purpose of this action was to reduce the system QA requirements while continuing to maintain its seismic Category I classification and retaining its technical specification requirements. The primary justification for the NRC acceptance is that the TVA units are BWR/4 designs with a steam driven HPCI system capable of cooling the plant during a station blackout. Furthermore, the letter stated that the action was acceptable because TVA had determined that RCIC was not needed to mitigate any design basis accidents or transients.

Question 3

Do we agree that the safety-related functions of the RCIC system are now enveloped by ADS and it is acceptable for RCIC to be non-safety related and non-seismic Category I?

ADS should be considered a last resort system because of the transient effects associated with its actuation. The use of RCIC will sometimes preclude the actuation of ADS and permit avoidance of the depressurization. It is not acceptable to downgrade the Seismic classification of RCIC because it is assumed to be part of ECCS during the HPCS inoperable LCO.

Question 4

Was NRC approval given to downgrade the RCIC system to a nonsafety-related status?

A search of NUDOCS was unable to identify NRC approval to downgrade the RCIC system at WNP-2 during the time period in question. It was determined that a requested license amendment to delete RCIC Technical Specification was denied in 1989.

