

September 27, 2005

Mr. Joseph E. Conen
BWR Owners Group
DTE Energy - Fermi 2
200 TAC
6400 N. Dixie Highway
Newport, MI 48166

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING THE BOILING
WATER REACTOR OWNERS GROUP (BWROG) TOPICAL REPORT (TR)
NEDO-33160, "REGULATORY RELAXATION FOR THE POST ACCIDENT SRV
[SAFETY RELIEF VALVE] POSITION INDICATION SYSTEM"
(TAC NO. MC5446)

Dear Mr. Conen:

By letter dated December 13, 2004, the BWROG submitted for NRC staff review TR NEDO-33160, "Regulatory Relaxation for the Post Accident SRV Position Indication System." The NRC staff has completed its preliminary review of your submittal, and has identified a number of items for which additional information is needed to continue its review. The NRC staff requires responses to the enclosed request for additional information (RAI) questions in order to continue our review.

In our acceptance letter for TR NEDO-33160, the NRC staff agreed to a review completion date of January 30, 2006. To support the above completion date, in the telephone conversation held between the NRC staff and Jim Kenney of your staff, BWROG stated that the NRC staff will receive your response to the enclosed RAI by October 30, 2005.

Please call me at 301-415-3308, if you have any questions on this issue.

Sincerely,

/RAI/

Bhalchandra Vaidya, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Project No. 691

Enclosure: Request for Additional Information

cc w/encl: See next page

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NRR-088

*** No Substantial change from the Memorandum**

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REQUEST FOR ADDITIONAL INFORMATION

BOILING WATER REACTOR OWNERS GROUP (BWROG)

TOPICAL REPORT (TR) NEDO-33160, "REGULATORY RELAXATION FOR

THE POST ACCIDENT SRV POSITION INDICATION SYSTEM"

PROJECT NO. 691

1. Regulatory Guide (RG) 1.97 groups the variables to be monitored during and after an accident into five types. Type D variables provide the operator with information on the operation of individual safety systems and systems important to safety. For Boiling Water Reactors (BWRs), RG 1.97 recommends that the Type D key variables be monitored by instrumentation that meet the Category 2 criteria. The Category 2 criteria includes environmental qualification, augmented quality, and reliable power. One of the Type D systems is the main steam system. RG 1.97 recommends that primary system safety relief valve (SRV) position, during automatic depressurization, flow through, or pressure in valve lines is a key variable for providing detection of accident and boundary integrity indication for the main steam system and, therefore, should meet the Category 2 criteria. In addition to the Category 2 recommendation for Type D key variables, RG 1.97 recommends that Type D variables that provide backup information should meet the Category 3 criteria.

TR NEDO-33160 recommends that SRV position be removed from the RG 1.97 Type D Category 2 instrumentation. The basis of this recommendation is the claim that SRV position indication is not used for accident detection and mitigation or boundary integrity indication.

TR NEDO-33160 states, "for a BWR, the knowledge of SRV position provides no essential information for ensuring a post-accident safety-related function." The RG 1.97 purpose for SRV position is not to provide information about a plant safety function. Types A, B, and C instrumentation provide information about plant safety functions. SRV position is a Type D variable because it provides system status. Therefore, NEDO-33160's discussion about plant safety functions should be replaced by a discussion about downgrading SRV position indication from Type D, Category 2 to Type D, Category 3.

2. NUREG-0737, Item II.D.3 requires that plants have SRV position indication in the control room. Section 50.34(f)(2)(xi) of Title 10 of the *Code of Federal Regulations* (10 CFR) requires plants to provide direct indication of relief and safety valve position (open or closed) in the control room. Per this requirement, BWRs are required to have instrumentation that provide operators with direct indication of SRV position. However, this requirement does not state the design and qualification criteria the instrumentation must meet.

In the Executive Summary of TR NEDO-33160, the last paragraph on page 4 states, "Other participating owners plan to remove the system." Please confirm that if the NEDO-33160 is approved, the regulatory requirements of NUREG-0737 Item II.D.3 and 10 CFR 50.34(f)(2)(xi) will continue to be met.

3. Since RG 1.97 recommends that main steam system status be monitored by SRV position instrumentation, TR NEDO-33160 needs to be revised to address all variables that provide key information about SRV position status. The TR has addressed reactor vessel pressure and suppression pool temperature as key variables for determining SRV operation. However, TR NEDO-33160 should also address other variables that provide the operator with information from which he can determine the SRV position (open or closed) and meet or exceed the Category 2 criteria .
4. TR NEDO-33160 states that BWR plants have other instrumentation that can provide the operator with information about SRV position. Some of these other instruments are commercial grade and do not meet the Category 2 criteria. TR NEDO-33160 should provide details about these other instruments including an analysis to determine if these instruments meet the Category 2 or Category 3 criteria. If these instruments do not meet the Category 2 or Category 3 criteria in entirety, describe the portions of the Category 2 or Category 3 criteria that are not met.
5. In the Conclusions and Recommendations of TR NEDO-33160, the first sentence of the second paragraph on page 12 states, "For the BWR, a post-accident SRV position provides no safety benefit, and thus should not be a RG 1.97 Type D indication." The staff does not agree with this conclusion. While a downgrade from the RG 1.97 Category 2 criteria to the Category 3 criteria is possible, SRV position indication would remain a Type D variable and the requirements of NUREG-0737 Item II.D.3 and 10 CFR 50.34(f)(2)(xi) remain unchanged. The conclusion of TR NEDO-33160 should be revised accordingly.
6. The reviewer's note in Technical Specification (TS) Table 3.3.3.1-1 of both NUREG-1433 and NUREG-1434 reads: "Table 3.3.3.1-1 shall be amended for each plant as necessary to list: 1. All Regulatory Guide 1.97, Type A instruments, and 2. All Regulatory Guide 1.97, Category 1, non-Type A instruments specified in the plant's Regulatory Guide 1.97, Safety Evaluation Report." Based on a cursory review, the NRC staff is unaware of any BWR plant that has SRV position as a Type A variable. Therefore, since SRV position is not a Type A variable or a Category 1 variable, licensee's for plants that currently have SRV position in their plant specific post accident monitoring (PAM) TSs, could request SRV position be removed from their plant specific PAM TSs, without reliance on TR NEDO-33160. TR NEDO-33160, therefore, would not be applicable for a plant that has SRV position as a Type A variable and the licensee would be expected to maintain the TS status of SRV position indication. Please identify any plant that has SRV position as a Type A variable.
7. Describe the effects of the proposed change on the BWR emergency operating procedures. Describe how the information from these instruments is used now, and how the operator will obtain the same information without these instruments.