

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555-0001

December 3, 2001

**NRC REGULATORY ISSUE SUMMARY 2001-23
RESETTING FAULT EXPOSURE HOURS FOR SAFETY SYSTEM
UNAVAILABILITY PERFORMANCE INDICATORS**

ADDRESSEES

All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

INTENT

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to inform power reactor licensees of the revised process to reset fault exposure hours for the mitigating system unavailability performance indicators (PIs). This RIS implements a longstanding provision for allowing licensees to reset fault exposure hours in certain instances in a manner that no longer overwrites historical data and changes the display of the previous quarters' performance indicators on the Web. This RIS requires no action or written response on the part of addressees.

BACKGROUND

The NRC's Reactor Oversight Process (ROP) uses PI information, along with results from the reactor inspection program, as the basis for assessing plant performance and determining the appropriate regulatory response. PIs are objective, periodic measures of plant performance and the effectiveness of licensee programs. Current PI collection and reporting guidance is given in the Nuclear Energy Institute's (NEI's) "Regulatory Assessment Performance Indicator Guideline," NEI 99-02, Revision 1, which the NRC endorsed in RIS 2001-11.

There are currently 18 PIs in the ROP organized under the seven cornerstones of safety. The mitigating systems cornerstone has five performance indicators for monitoring the performance of key systems that are designed to mitigate the effects of initiating events. Four of these five PIs monitor the readiness of important safety systems to perform their safety functions in response to off-normal events or accidents by the systems' unavailability. The safety systems monitored by these four PIs are the emergency AC power system, the high-pressure injection system, the high-pressure heat removal system, and the residual heat removal system.

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The unavailability for each of the mitigating systems is determined by averaging the unavailabilities of each train of the system. The train unavailabilities are calculated each quarter by summing the planned unavailable hours, unplanned unavailable hours, and fault exposure hours for the past 12 quarters and then dividing by the number of hours the train was required during the previous 12 quarters.

Fault exposure hours are the time that a train spends in an undetected unavailable condition. The PI reporting guidance in NEI 99-02, Revision 1, allows fault exposure hours for a single item to be reset provided four criteria are met:

- (1) four quarters have elapsed since the discovery,
- (2) the fault exposure hours for the item are greater than or equal to 336 hours and the green-white threshold has been exceeded,
- (3) the licensee has completed corrective actions for the item to preclude recurrence of the condition, and
- (4) the NRC has completed supplemental inspection activities and any resulting open items related to the condition causing the fault exposure have been closed out in an NRC inspection report.

If these criteria are met, the guidance in NEI 99-02, Revision 1, allows licensees to reset the fault exposure hours to zero for the affected quarter(s) by submitting a change report that includes a comment explaining the change. The change affects PI calculations for the quarter in which the change report is submitted and the prior quarters inclusively back to the quarter containing the fault exposure hours.

ISSUE SUMMARY

The staff discovered an unintended consequence associated with resetting fault exposure hours in accordance with the guidance in NEI 99-02, Revision 1. Namely, the reset resulted in inadvertently overwriting the historical data and changing the Web display, making it difficult to discern and understand plant performance in prior quarters for the four safety system unavailability PIs.

To address this concern, the NRC asks that licensees submit reset fault exposure hours using the process and format presented herein. The normal quarterly PI data submittals will be unaffected. Change reports should be submitted only by those plants that meet the criteria and wish to reset fault exposure hours in accordance with the reset process. Appropriate changes have been made to NEI's PI Web system, used to generate the PI reports for submission to the NRC, and to the NRC's system for calculating and posting the PI information to the ROP Web page. This change process will also be incorporated into NEI 99-02, Revision 2.

Licensees should submit any reset fault exposure hours “effective” for the fourth quarter of 2001 and in the future under the revised process outlined in this RIS and NEI 99-02, Revision 2. In addition, licensees that have submitted reset fault exposure hours under the previous process should reenter those hours to temporarily undo the previous reset activity, and should submit a new change report to properly reset the fault exposure hours in accordance with the corrected process. Licensees should also report any planned and unplanned unavailable hours that were previously unreported to avoid double counting.

The data submittal should conform to the general structure of the NRC PI data files, as described in Appendix B to NEI 99-02, and should include the following information: (1) the “reset” designation “FR” and the applicable PI, (2) the quarter and year being reset, (3) the effective quarter and year in which all reset criteria are first met, (4) a comment explaining the reset activity, and (5) the number of reset fault exposure hours, additional planned unavailable hours, and additional unplanned unavailable hours for each train. Data files prepared by the NEI PI Web system will already be properly formatted for submission to the NRC.

The revised calculation for the safety system unavailability will subtract out the “effective reset hours” from the unavailable hours before dividing by the hours each train is required. A row will also be added to the table on the Web display for these effective reset hours for each of the safety system unavailability PIs.

This RIS provides guidance to addressees for the voluntary reporting of PI data. Licensees are asked to provide this PI data as an attachment to an e-mail addressed to spidata@nrc.gov on or before January 21, 2002, to support the staff’s end-of-cycle reviews for calendar year 2001. The data files should include reset fault exposure hours for both the fourth quarter of 2001 and any corrections to previously submitted reset fault exposure hours. The change report file can be included with other change report files and/or the quarterly PI data submittal. Addressees should continue to submit change report files for reset fault exposure hours in addition to their quarterly PI submittals by the 21st of the month following the end of each calendar quarter.

BACKFIT DISCUSSION

This RIS requires no action or written response. Any action on the part of addressees to collect and transmit PI data in accordance with the guidance contained in this RIS is strictly voluntary and, therefore, is not a backfit under 10 CFR 50.109. Consequently, the staff did not perform a backfit analysis.

FEDERAL REGISTER NOTIFICATION

A notice of opportunity for public comment on this RIS was not published in the *Federal Register* because the NRC has worked closely with NEI, industry representatives, members of the public, and other stakeholders since early 1998 on the development of NRC’s ROP, including the collection of PI data. A January 10, 2001, *Federal Register* notice solicited written comments by April 13, 2001, on all aspects of the new ROP. A three day public workshop for external stakeholders was held in late March, 2001. Monthly public meetings on the PI process

and other ROP issues were held during Spring 2001, at which time, the pilot PI effort was discussed and interested stakeholders were given the opportunity to provide their comments.

PAPERWORK REDUCTION ACT STATEMENT

This RIS contains a voluntary information collection that is subject to the Paperwork Reduction Act of 1995 (22 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. The collection of this information is covered by OMB clearance 0.3150-0195 which expires on October 31, 2002.

If there are any questions about this matter, please telephone or email the technical contact listed below.

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LIST OF RECENTLY ISSUED
NRC REGULATORY ISSUE SUMMARIES

Regulatory Issue Summary No.	Subject	Date of Issuance	Issued to
2001-22	Attributes of A Proposed No Significant Hazards Consideration Determination	11/20/2001	All holders of operating licenses for nuclear power reactors, including those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
2001-21	Licensing Action Estimates for Operating Reactors	11/16/2001	All power reactor licensees, including those that have elected to permanently cease operations and have submitted certifications pursuant to Title 10, Section 50.82(a)(1), of the Code of Federal Regulations (10 CFR 50.82(a)(1))
2001-20	Revisions to Staff Guidance for Implementing NRC Policy on Notices of Enforcement Discretion	11/14/2001	All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
2001-19	Deficiencies in the Documentation of Design Basis Radiological Analyses Submitted in Conjunction with License Amendment Requests	10/18/2001	All holders of operating licenses for nuclear power reactors