

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

February 7, 2005

**NRC REGULATORY ISSUE SUMMARY 2005-01  
CHANGES TO NOTICE OF ENFORCEMENT DISCRETION (NOED)  
PROCESS AND STAFF GUIDANCE**

**ADDRESSEES**

All holders of operating licenses for power reactors, except those that are permanently shutdown.

**INTENT**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to inform addressees and other stakeholders of certain immediately effective changes to the NOED process and staff guidance. This RIS requires no action or written response on the part of an addressee.

This RIS and attached revised NRC Inspection Manual Part 9900: Technical Guidance supersede guidance on the same aspects of the NOED process currently in the NRC Inspection Manual Part 9900: Technical Guidance.

**BACKGROUND INFORMATION**

Section VII.C of the NRC's "General Statement of Policy for NRC Enforcement Actions (Enforcement Policy)," NUREG-1600, describes the circumstances in which the staff may exercise enforcement discretion in the form of an NOED.

Circumstances may occasionally arise where a power reactor licensee's compliance with a technical specification (TS) or other license condition would involve an unnecessary plant transient or performance testing, inspection, or other system realignment that is inappropriate for the specific plant conditions, or would cause unnecessary delays in plant startup without a corresponding health and safety benefit. In these circumstances, the NRC staff may choose to not enforce the applicable TS or other license condition. This enforcement discretion, designated as an NOED, is exercised only if the NRC staff is clearly satisfied that the action is consistent with protecting the public health and safety. In other situations when a potential noncompliance is accompanied by severe weather or some other natural phenomenon, the staff may balance the overall public health and safety implications of the reactor not operating against the potential risks (radiological or other

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hazards) associated with reactor operation and make a determination that granting an NOED will not impact safety unacceptably. Staff guidance for implementing the NOED policy for power reactors is provided in the NRC Inspection Manual Part 9900: Technical Guidance. This guidance is revised periodically to reflect necessary updates and enhancements based on experience with the process. It was last updated on November 2, 2001.

Based on about 3 years of staff experience with the current guidance and feedback from licensees and other stakeholders, it is clear that some aspects of the policy and guidance need to be clarified or improved. The Inspection Manual Part 9900 guidance has been updated and is attached. This RIS discusses the process clarifications and improvements that are being implemented and explains their basis. These changes were discussed with representatives of the Nuclear Energy Institute (NEI) at a public meeting with the staff on July 14, 2004, were presented at the NEI Licensing Forum on October 20, 2004, and were reviewed at a public meeting on November 15, 2004. They are summarized below.

## **SUMMARY OF ISSUES**

### **1. NOEDs vs. License Amendments**

The staff continues to emphasize that the license amendment process is to be used in preference to NOEDs whenever possible and that the emergency and exigent provisions of 10 CFR 50.91 should be appropriately applied. Normally, the staff considers NOED requests only if there is not enough time to process an emergency amendment request and the licensee can demonstrate that they contacted the staff immediately after identifying the problem. Generally, an NOED request will not be considered if at least 72 hours of Completion Time remain for the affected LCO or LCOs at the time the problem is identified. The staff can often disposition an emergency amendment request in less than 72 hours. If less than 72 hours remain, the staff will consider NOED requests on a case-by-case basis.

Amendments are preferable to NOEDs because their basis and authority are established in the regulations, the process is more scrutable, and they provide for public participation. Occasionally exigent amendments can be used in lieu of NOEDs, but emergency amendments will usually be requested because of time constraints. This approach will further reduce the already small number of NOED requests considered by the staff each year.

### **2. Issuing Office for NOEDs**

The distinction between region-issued and NRR-issued NOEDs has been eliminated. This distinction evolved over time on the basis of NOED duration and whether or not a follow-up license amendment was appropriate. In fact, although historically most NOEDs have been issued and documented by the cognizant regions without follow-up license amendments, all NOED requests are evaluated and decisions made jointly by the regional and NRR staffs. Thus, the distinction is unnecessary. As a result of other changes to the NOED process, discussed below, most NOEDs will have follow-up license amendments regardless of the NOED duration. As in the past, all NOED requests will be reviewed by the responsible region and NRR staffs. However, the region will have the lead for issuing the NOED documentation,

including weather-related NOEDs. The staff believes that this administrative change will make the process more predictable, consistent, and efficient and eliminate the need to categorize NOEDs as region- or NRR-issued. The Enforcement Policy has been changed to allow this process change.

### 3. Follow-up License Amendments

In general, licensees must submit a request for an exigent license amendment as a follow-up to an NOED granted by the staff. The request is to be submitted within 4 working days of the NOED verbal authorization and is to be acted on by the staff within 4 weeks of receipt. Such follow-up exigent amendment requests will be required if the need for the NOED request was attributable to a limiting condition of the license that could credibly recur. A follow-up license amendment processed through the established regulatory process provides the opportunity for public participation, albeit after the fact. The need for a follow-up amendment shall be discussed and resolved during the NOED request teleconference and addressed in the NOED documentation. If the need for a follow-up amendment is not resolved, the NOED request will likely not be granted.

As a result, a greater number of NOEDs will now require follow-up amendment requests. However, the total number of NOEDs requested and granted is quite small, having averaged only about a dozen per year, and will become even smaller as a result of the changes discussed in this RIS.

### 4. Permanent vs. Temporary License Amendments

Generally, permanent, as opposed to temporary (or one-time), license amendments should be requested to address operational issues, either in lieu of or as follow-up to NOEDs. If there is a problem with a TS or other license condition, it should be permanently solved, precluding the possibility of recurrence. Generally, but not always, if a change can be justified on a temporary or one-time basis, it can be found acceptable as a permanent change. The staff recognizes, however, there are some situations where a temporary amendment, either in lieu of or as a follow-up to an NOED, is an appropriate and acceptable resolution. Examples include:

- a. amendments whose acceptability relies on complex compensatory actions that are not practical on a permanent basis;
- b. risk-informed amendments whose acceptability cannot be demonstrated on a permanent basis; or
- c. amendments requested and approved until a supportable permanent change request can be submitted and approved.

Licensee justification for a temporary amendment should be discussed with the staff during the NOED request telecon, or before submitting an in-lieu-of emergency amendment request. If situations arise where the staff believes a permanent amendment is warranted but the licensee disagrees, the staff cannot require the licensee to request a permanent amendment. Assuming that the request is otherwise technically justified, the staff's safety evaluation will document: that

the temporary nature of the amendment was not sufficiently justified; that subsequent requests for the same condition that required the NOED might not meet 50.91 emergency criteria; and that recurrence of the condition may be considered inadequate corrective action in accordance with 10 CFR Part 50 Appendix B. If warranted, a license condition could be added to require a subsequent permanent amendment request as a follow-up to the temporary amendment.

#### 5. Demonstration of Acceptable Risk

The current NOED policy and guidance require that licensees demonstrate to the staff's satisfaction, that a proposed NOED does not result in any net increase in radiological risk to the public. The guidance states that licensees may satisfy this requirement by providing at least a qualitative risk assessment, comparing risk of continued operation under the proposed NOED in a degraded condition (including any risk benefits attributable to planned compensatory measures) with that from complying with the requirements of the license - normally transition to shutdown, repair, and transition to power operation. While the guidance states that a qualitative assessment is acceptable, in fact qualitative assessments are difficult for licensees to present and for the staff to assess in a consistent, supportable manner.

The staff acknowledges that transition and shutdown risks are not negligible. Indeed, these risks may be significant in some situations (e.g., shutdown of the unit with a failed startup transformer that would have safety-related loads transferred to it following a turbine trip). However, transition risk models, in general, have not been widely developed in the industry and only a limited number of plants have such models. In addition, existing transition models may not have been subjected to an industry peer review process. These models have only been used in limited applications for generic technical specification Completion Time extension studies. Notwithstanding these limitations, plant-specific transition and shutdown risk models may be used to gain additional risk insights to support an NOED request.

After several years of study by staff, contractors, and industry stakeholders, the staff has concluded that a quantitative assessment of the transition to shutdown, repair, and transition to power operation evolution is not necessary to arrive at a conclusion that an NOED can be granted, provided a risk-informed basis demonstrates that continued operation is essentially within the plant's normal work control levels and, therefore, there is no net increase in radiological risk to the public at those levels. Normal work control levels, expressed in terms of incremental core damage probability and large early release probability, are specified in industry and NRC guidance on configuration risk management (e.g., Regulatory Guide 1.182).

The numerical criteria cited below are conservative with respect to overall operational risk levels that the staff has accepted for nuclear power plant operation in accordance with 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants" as implemented according to NUMARC 93-01 (version 2000) and endorsed by NRC Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." 10 CFR 50.65 guidance for configuration risk management programs allows for substantially greater plant operational risk while operating in compliance with technical specifications than that which would be acceptable under the NOED policy and guidance with the plant operating in non-compliance with technical specifications.

Nevertheless, these numerical criteria were selected so that, when combined with other factors that reduce risk (e.g., quantifiable and/or unquantifiable compensatory measures), the staff may conclude that the licensee has successfully demonstrated that there is no net increase in radiological risk while operating for the period of time specified in the NOED.

### Guidelines

The following are generic guidelines for risk analysis used in support of requests for NOEDs. To the extent practicable, the licensee should address the quantitative and qualitative aspects noted below. The numerical guidance for acceptance was established to augment qualitative arguments that the continued operation of the plant during the period of enforcement discretion will not cause risk to exceed the level determined acceptable during normal work controls and, therefore, there is no net increase in radiological risk to the public.

- a. Use the zero maintenance PRA model to establish the plant's baseline risk and the estimated risk increase associated with the period of enforcement discretion. For the plant-specific configuration the plant intends to operate in during the period of enforcement discretion, the incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) should be quantified and compared with guidance thresholds of less than or equal to an ICCDP of  $5E-7$  and an ICLERP of  $5E-8$ . These numerical guidance values are not pass-fail criteria.
- b. Discuss the dominant risk contributors (cut sets/sequences) and summarize the risk insights for the plant-specific configuration the plant intends to operate in during the period of enforcement discretion. This discussion should focus primarily on risk contributors that have changed (increased or decreased) from the baseline model as a result of the degraded condition and resultant compensatory measures.
- c. Explain compensatory measures that will be taken to reduce the risk associated with the specified configuration. Compensatory measures to reduce plant vulnerabilities should focus on both event mitigation and initiating event likelihood. The objectives are to:
  - i. reduce the likelihood of initiating events;
  - ii. reduce the likelihood of unavailability of trains redundant to the equipment that is out-of-service during the period of enforcement discretion; and
  - iii. increase the likelihood of successful operator recovery actions in response to initiating events.

An example is a situation where a motor-driven auxiliary feedwater (MDAFW) pump has failed and risk insights have established that plant transient initiators may be risk-significant events because the plant has no primary feed-and-bleed

capability and only limited secondary feed capability is available. As a compensatory measure during the period of enforcement discretion, the licensee may defer non-essential surveillances or other maintenance activities where human error contributes to the likelihood of a plant scram and subsequent demand on the remaining AFW pumps. Another example of appropriate compensatory measures would be actions that increase the likelihood of success in manually aligning or starting equipment in response to an initiating event (e.g., stationing operators locally at equipment, "just-in-time training", and/or additional contingency plans).

- d. Discuss how the proposed compensatory measures are accounted for in the PRA. These modeled compensatory measures should be correlated, as applicable, to the dominant PRA sequences identified in item b. above. In addition, other measures not directly related to the equipment out-of-service may also be implemented to reduce overall plant risk and, as such, should be explained. Compensatory measures that cannot be modeled in the PRA should be assessed qualitatively.
- e. Discuss the extent of condition of the failed or unavailable component(s) to other trains/divisions of equipment and what adjustments, if any, to the related PRA common cause factors have been made to account for potential increases in their failure probabilities. The method used to determine the extent of condition should be discussed. It is recognized that a formal root cause or apparent cause is not required given the limited time available in determining acceptability of a proposed NOED. However, a discussion of the likely cause should be provided with an associated discussion of the potential for common cause failure.
- f. Discuss external event risks for the specified plant configuration. An example of external event risk is a situation where a reactor core isolation cooling (RCIC) pump has failed and a review of the licensee's Individual Plant Examination of External Events or full-scope PRA model identifies that the RCIC pump is used to mitigate certain fire scenarios. Action may be taken to reduce fire ignition frequency in the affected areas or reduce human error associated with time-critical operator actions in response to such scenarios.
- g. Discuss forecasted weather conditions for the NOED period and any plant vulnerabilities related to weather conditions.

## **BACKFIT DISCUSSION**

This RIS requires no action or written response and is, therefore, 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 the RIS was not published in the *Federal Register* because it is informational and pertains to a staff position that does not represent a significant departure from current practice.

### **SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT OF 1996**

The NRC has determined that this action is not subject to the Small Business Regulatory Enforcement Fairness Act of 1996.

### **PAPERWORK REDUCTION ACT STATEMENT**

This RIS does not contain any information collections and, therefore, is not subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). The information collection requirements referenced in Manual Chapter 9900 were approved by the Office of Management and Budget, approval numbers 3150-0011 and 3150-0136.

#### Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

Please direct any questions or wish to provide any feedback about this matter to the technical contact listed below.

**/RA/**

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Attachment: Part 9900 Technical Guidance, "Operations - Notices of Enforcement Discretion"

Note: NRC generic communications may be found on the NRC public website, <http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

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