

RULEMAKING ISSUE
AFFIRMATION

SECY-00-0093

April 21, 2000

FOR: The Commissioners
FROM: William D. Travers
Executive Director for Operations
SUBJECT: RULEMAKING TO MODIFY THE EVENT REPORTING REQUIREMENTS FOR POWER REACTORS IN [10 CFR 50.72](#)
AND [50.73](#) AND FOR INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS (ISFSI) IN [10 CFR 72.216](#)

- [PURPOSE:](#)
- [BACKGROUND:](#)
- [DISCUSSION:](#)
 - [Outside the Design Basis of the Plant](#)
 - [System Actuation](#)
 - [Invalid Actuation](#)
 - [Required Initial Reporting Times in § 50.72](#)
- [RELATED PROGRAMS:](#)
- [RESOURCES:](#)
- [COORDINATION:](#)
- [RECOMMENDATIONS:](#)

PURPOSE:

The purpose of this paper is to obtain Commission approval of a final rule to modify the event reporting requirements for power reactors in [10 CFR 50.72](#) and [50.73](#) and for ISFSI in [10 CFR 72.216](#).

BACKGROUND:

An advance notice of proposed rulemaking (ANPR) was published in the *Federal Register* on July 23, 1998. The ANPR requested public comments on several concrete proposals for modification of the event reporting rules. Public meetings were held to discuss the ANPR at NRC Headquarters on August 21, 1998, in Rosemont, Illinois on September 1, 1998, and at NRC Headquarters on November 13, 1998.

A proposed rule was published in the *Federal Register* on July 6, 1999. Concurrently, a draft of the associated event reporting guidelines (NUREG-1022, Revision 2) was made available for public comment. A public meeting was held at NRC Headquarters on August 3, 1999, to discuss the proposed rule and draft guidelines. The comment period for the proposed rule expired September 20, 1999. Twenty-seven comment letters were received, representing comments from 24 nuclear power plant licensees (utilities), two organizations of utilities, and one State agency.

In response to discussions at a briefing of the Advisory Committee on Reactor Safeguards (ACRS) on February 3, 2000, the staff held additional public meetings on February 25 and March 22, 2000, to facilitate the resolution of comments.

DISCUSSION:

In the final rule, the essential safety purposes of § 50.72 are unchanged. This section provides for immediate reporting of significant events where: (1) immediate NRC action may be required to protect the public health and safety, or (2) the NRC needs timely, accurate information to respond to heightened public concern.

The essential safety purposes of § 50.73 are also unchanged. It identifies the types of events and problems believed to be significant and useful to the NRC's effort to identify and resolve threats to public health and safety. It is designed to provide information needed for engineering studies of anomalies, trend analysis of occurrences, and identification of accident precursors. This enables the NRC to determine whether further action is needed to maintain or improve reactor safety.

The objectives of this rulemaking are as follows:

- (1) To better align the reporting requirements with the NRC's current reporting needs for information to carry out its safety mission.
- (2) To reduce the unnecessary reporting burden, consistent with the NRC's reporting needs associated with events of little or no safety significance.
- (3) To clarify the reporting requirements where needed.

- (4) Any changes should be consistent with NRC actions to improve integrated plant safety assessments.

The noteworthy issues are summarized below.

Outside the Design Basis of the Plant

In the proposed rule, we recommended deleting the requirement to report when the plant is in a condition outside the design basis of the plant which, in some cases, results in reporting of events with little safety significance. However, conditions outside the design basis of the plant would still be reportable if they are significant enough to qualify under other criteria, such as:

- (1) *Plant in an unanalyzed condition that significantly degraded plant safety.*
- (2) *Event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident.*
- (3) *Condition or operation prohibited by the plant's technical specifications.*
- (4) *Independent trains or channels inoperable due to a single cause or condition.*
- (5) *Principal safety barrier seriously degraded.*
- (6) *A proposed new criterion - component in a degraded or nonconforming condition, such that the ability to perform its specified safety function is significantly degraded and the condition could reasonably be expected to apply to other similar components in the plant. This was proposed to ensure that design basis or other discrepancies would continue to be reported if the capability to perform a specified safety function is significantly degraded and the condition has generic implications.*

Industry commenters objected strongly to the proposed new criterion, indicating that it would be: (1) unnecessary; (2) unclear and subject to widely varying interpretation; (3) overly burdensome, representing a significant increase in reporting requirements; and (4) not in accordance with the stated objectives of the rulemaking.

After consideration of the comments, the proposed new criterion has been modified to address the concerns raised in the comments. As modified, the new criterion requires reporting any *event or condition that as a result of a single cause could have prevented the fulfillment of a safety function for two or more trains or channels in different systems that are needed to: shut down the reactor and maintain it in a safe shutdown condition; remove residual heat; control the release of radioactive material; or mitigate the consequences of an accident.* Further, it excludes events that result from: (1) *a shared dependency among trains or channels that is a natural or expected consequence of the approved plant design;* or (2) *normal and expected wear or degradation.*

With these exclusions, the new criterion captures those events with enough generic significance that a single cause could have prevented the fulfillment of the safety function of multiple trains or channels, but:

- (1) The event would not be captured by §§ 50.73(a)(2)(v) and 50.72(b)(3)(v) [*event or condition that could have prevented fulfillment of a safety function*] because the affected trains or channels are in different systems; and
- (2) The event would not be captured by § 50.73(a)(2)(vii) [*common cause inoperability of independent trains or channels*] because the affected trains or channels are:
 - (a) Not assumed to be independent of each other in the plant's safety analysis; or
 - (b) Not both considered to be inoperable.

Events of this type indicate a condition where the NRC needs to consider taking action to ensure the condition is addressed at the reporting plant and/or other plants as appropriate. Interpretation of the new criterion is straightforward because the term "could have prevented the fulfillment of the safety function" has been used successfully for many years in connection with other reporting criteria. Based on conversations at the public meetings discussed above, the staff has concluded that the new criterion will be adequately clear. Also, the net effect of (1) removing the requirement to report a *condition outside the design basis of the plant* and (2) adding this new criterion will be fewer reports. The reports that are submitted will have a more direct safety nexus.

System Actuation

Under current rules, licensees are required to report actuation of "any engineered safety feature (ESF), including the reactor protection system (RPS)." In the proposed rule we recommended reporting actuation for a specific list of systems, to be

provided in the rule. The stated purpose was to: (1) provide consistent reporting for actuation of a few standby systems that are highly risk-significant and (2) eliminate reporting for events of lesser significance, such as actuation of control room ventilation systems. Most commenters opposed this approach. They indicated that each plant should report actuation for only those systems that have been identified as ESFs in that plant's Final Safety Analysis Report (FSAR). On the other hand, the ACRS recommended that, rather than placing a generic list in the rule, a list of systems be determined for each specific plant, based on risk-significance of systems at that plant.

After consideration of the comments, the final rule includes a list of systems. However, the list has been modified as appropriate to address comments regarding specific items on the list. This list will provide consistent reporting for the listed systems, which are of high risk-significance. It is estimated to result in fewer reports because the cases where additional reports will be required are outweighed by the elimination of reports involving systems of lesser risk-significance.

In the future, as part of the effort to "risk-inform" [10 CFR Part 50](#), there may be an opportunity to develop plant-specific lists of systems of the most risk-significant systems in accordance with NRC-approved methods and criteria. At that time it will likely be appropriate to consider limiting the application of this and/or other reporting criteria to those systems.

Invalid Actuation

In the proposed rule we recommended eliminating telephone reporting under § 50.72 for invalid system actuations. We also recommended retaining the requirement for reporting of invalid actuations under § 50.73. Information about invalid actuations is needed to support the NRC staff's estimates of equipment reliability. Most commenters opposed any reporting of invalid actuations.

After consideration of the comments, the final rule still requires reporting of invalid actuations under § 50.73. However, for this type of event the NRC needs less information than is required in a written Licensee Event Report (LER). Thus, in order to reduce the burden of reporting an invalid actuation, a licensee has the option of providing a telephone notification. This is far less burdensome than submitting an LER. In addition, the telephone notification may be made at any time within 60 days, because the information is not needed immediately.

Required Initial Reporting Times in § 50.72

In the proposed rule we recommended that declaration of an emergency class and deviation from the technical specifications under § 50.54(x) continue to be reportable within 1 hour. All other events reportable by telephone under § 50.72 would be reportable within 8 hours. It was recognized that there were concerns with the proposed approach, particularly with the 8-hour time limit. Comments were specifically invited on several alternatives. Most commenters supported the proposed approach. However, a State agency expressed concerns about waiting 8 hours for reporting of certain events.

After consideration of the comments and reconsideration of the NRC's need for information, the final rule requires 4-hour reporting, if not reported in 1 hour, for several types of events.

- (1) For 3 kinds of unplanned transients, there may be a need for the NRC to take a reasonably prompt action, such as partially activating its response plan to monitor the course of the event. They are:
 - (a) *A valid ECCS discharge into the RCS, except when it results from and is part of a pre-planned sequence during testing or operation.* Previously this was a 1-hour report.
 - (b) *Initiation of a shutdown required by the plant's technical specifications.* Previously this was a 1-hour report.
 - (c) *A scram when critical, except when it results from and is part of a pre-planned sequence during testing or operation.* Previously, actuation of any engineered safety feature (ESF), including the reactor protection system (RPS), was a 4-hour report.
- (2) For an event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made, there may be a need for the NRC to respond to heightened public concern. This requirement is unchanged from the current rules.

Three criteria are deleted from § 50.72 because they are not needed in order to obtain prompt notification of events. They are retained in § 50.73, however, because they are needed in order to obtain written LERs.

- (1) *A natural phenomenon or other external event that poses an actual threat to plant safety, or significantly hampers site personnel in the performance of duties necessary for safe operation.* Events of this type are captured by declaration of an emergency class, which is reportable within 1 hour.
- (2) *An internal event that poses an actual threat to plant safety, or significantly hampers site personnel in the performance of duties necessary for safe operation, including fires, toxic gas releases, or radioactive releases.* Events of this type are captured by declaration of an emergency class, which is reportable within 1 hour.

- (3). *An airborne radioactive release, or liquid effluent release, that exceeds specific limits.* Releases that are large enough to warrant prompt notification are captured by *declaration of an emergency class* (i.e., notification of unusual event, or higher). This is reportable within 1 hour after the declaration. Releases for which *a news release is planned or notification to another government agency has been or will be made* are reportable within 4 hours.

For the remaining events reportable under § 50.72, the final rule requires 8-hour reporting, if not reported in 1 hour or 4 hours. These are events where there may be a need for the NRC to take an action within about a day, such as initiating a special inspection or investigation. In summary, they are:

- (1) *The plant including its principal safety barriers being in a seriously degraded condition, or the plant being in an unanalyzed condition that significantly degrades plant safety.*
- (2) *A valid actuation of any of the systems specified in the rule, except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation.*
- (3) *An event or condition that at the time of discovery could have prevented fulfillment of the safety function of structures or systems needed to shut down the reactor, remove residual heat, control the release of radioactive material, or mitigate an accident.*
- (4) *Transport of a radioactively contaminated person to an offsite medical facility.*
- (5) *A major loss of emergency assessment capability, offsite response capability, or offsite communications capability.*

RELATED PROGRAMS:

In related programs, the staff is developing revisions to the process for oversight of operating reactors, including the inspection, assessment, and enforcement processes. In connection with this effort, the staff has considered the kinds of event reports that would be eliminated by the proposed rules and believes that the changes are consistent with the oversight process.

The final rule changes reporting requirements in §§ 50.72, 50.73, and 72.216. Similar requirements exist elsewhere in 10 CFR Parts 72 and 73. In SECY-99-181, dated July 9, 1999, and as approved by the Commission SRM dated August 13, 1999, the staff acknowledged that the reporting requirements in 10 CFR Parts 72 and 73 should be evaluated to determine whether a conforming rule change was necessary. Consistent with SECY-99-181, the staff will provide a rulemaking plan to the Commission for changes to the reporting requirements in [10 CFR Parts 72 and 73](#), or a Commission paper explaining why staff thinks that a rulemaking plan is not necessary, within 5 months after the Part 50 rule change is completed.

In addition, one of the comment letters recommended making conforming changes to reporting requirements in [10 CFR Part 76](#). As discussed in the *Federal Register* notice in response to Comment V, the staff plans to include 10 CFR Part 76 in the above evaluation.

RESOURCES:

Resources to implement this final rule are included in the FY 2000 budget. It is not expected that meaningful savings of NRC resources will occur as a result of fewer reports under the revised reporting requirements.

COORDINATION:

OGC has reviewed this paper and has no legal objections. The Office of the Chief Information Officer has reviewed this paper for information technology and information management implications and concurs in it. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

The Advisory Committee on Reactor Safeguards was briefed on February 3, 2000. As indicated in [Attachment 4](#), the Committee subsequently decided not to comment.

RECOMMENDATIONS:

That the Commission:

- (1) Approve the publication of the attached *Federal Register* notice that promulgates the final rule;
- (2) Certify that this rule, if issued, would not have a significant economic impact on a substantial number of small entities to satisfy the requirements of the Regulatory Flexibility Act, 5 U.S.C. 605(b); and

(3) Note that:

- (a) This rule amends information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq*). The information collection requirements for this rule will be submitted to OMB when the Commission approves the final rule. The final rule will be published approximately 2 weeks after OMB approval is received.
- (b) The final rule will be published in a *Federal Register* notice ([Attachment 1](#) ). Copies will be sent to reactor and ISFSI licensees, State Liaison Officers, and those who commented on the proposed rule.
- (c) The Regulatory Analysis ([Attachment 2](#)) will be made available in the Public Document Room.
- (d) Regulatory guidance ([Attachment 3](#)) will be published concurrently with publication of the final rule. The *Federal Register* notice that publishes the final rule will provide notice of the availability of the regulatory guidance.
- (e) The Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification regarding economic impact on small entities and the reasons for it as required by the Regulatory Flexibility Act.
- (f) A press release will be issued.
- (g) The appropriate Congressional committees will be informed.
- (h) The NRC has determined that this action is not a major rule under the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) and has confirmed this determination with OMB. This determination will be reflected in correspondence to the President of the Senate, the Speaker of the House, and the General Counsel of the General Accounting Office.

/RA by Frank Miraglia Acting For/

William D. Travers
Executive Director for Operations

Contact: Dennis Allison, NRR/DRIP/RGEB
(301) 415-1178

Attachments:

1. [Federal Register Notice](#) 
2. [Regulatory Analysis](#)
3. [Event Reporting Guidelines \(NUREG-1022, Revision 2\)](#)
4. [ACRS Memorandum](#)

ATTACHMENT 2

REGULATORY ANALYSIS

Modifications to 10 CFR 50.72, "Immediate notification,"
10 CFR 50.73, "Licensee event report system," and
10 CFR 72.216, "Reports"

(March 2000)

- [Proposed Action](#)
- [Statement of the Problem](#)
- [Objectives](#)
- [Alternatives](#)
- [Consequences](#)
- [Table 1](#)
- [Table 2](#)
- [Decision Rationale](#)

Proposed Action

The Nuclear Regulatory Commission (NRC) is amending the event reporting requirements for nuclear power reactors and independent spent fuel storage installations in 10 CFR 50.72, 50.73, and 72.216 to:

- (1) update the current rules, including reducing or eliminating the reporting burden associated with events of little or no safety significance and
- (2) better align the rules with the NRC's current needs, including revising reporting requirements based on importance to risk and extending the required reporting times consistent with the need for prompt NRC action.

Statement of the Problem

Experience with the current rules has indicated they are in need of change in several areas. For example:

- (1) There is a need to reduce or eliminate the reporting burden associated with events of little or no safety significance; the final amendments eliminate reporting of those design problems that are insignificant and those cases of late surveillance tests that are insignificant.
- (2) There is a need to better align the rules with the NRC's current needs; the final rules extend the required initial reporting times for some types of events to be more consistent with the actual need for prompt NRC action.
- (3) There is a need to obtain information better related to risk; the final amendments revise the requirement to report safety system actuation in order to: (1) reduce reporting for systems and/or events with minimal risk significance, and (2) increase consistency of reporting for systems of greater risk significance.

Objectives

The objectives of these final amendments are as follows:

- (1) To better align the reporting requirements with the NRC's needs for information to carry out its safety mission. An example is extending the required initial reporting times for some events, consistent with the time at which the reports are needed for NRC action.
- (2) To reduce the reporting burden, consistent with the NRC's needs. An example is eliminating the reporting of design and analysis defects and deviations with little or no risk- or safety-significance.
- (3) To clarify the reporting requirements where needed. An example is clarifying the criteria for reporting design or analysis defects or deviations.
- (4) Any changes should be consistent with NRC actions to improve integrated plant assessment.

Alternatives

The only reasonable alternative that has been identified is to take no action.

Consequences

1. Status Quo

This is the base case. The incremental values and impacts for the base case are zero. However, maintaining the status quo would result in continued submittal of the some reports which the NRC has now identified as unneeded.

2. Proposed Action

The one-time implementation costs to licensees are estimated to be about 70 hours per reactor for revising procedures and about 130 hours per reactor for training. This yields an estimated burden increase of about 21,000 hours, or about 200 hours per reactor for 104 operating reactors.

A key benefit of the proposed amendments would be a reduction in the recurring annual reporting burden on licensees, as a result of reducing the efforts associated with reporting events of little or no risk or safety significance. Based on a review of past reports, the proposed amendments are expected to result in about 180 fewer telephone notifications per year and about 270 fewer written licensee event reports (LERs) per year under 10 CFR 50.72 and 50.73. It is estimated that licensees expend 1.5 hours per telephone notification and 50 hours per written LER for the events involved. This yields an estimated recurring annual burden reduction of about 14,300 hours per year industry-wide, or about 140 hours per reactor per year.

The NRC's recurring annual review efforts for telephone notifications will not be significantly reduced because the operations

officer and daily event screening systems would remain about the same. For similar reasons, the NRC's recurring annual review efforts for written LERs will not be significantly reduced.

The estimated changes in cost or burden have been discounted to present value using a 7-percent real discount rate⁽¹⁾ and 20-year plant life, summed, and rounded to 2 significant digits. The results, in terms of hours, are presented in Table 1. The same results, converted to dollars at a value of about \$78 per hour⁽²⁾ and rounded to 2 significant digits are presented in Table 2.

Table 1

Estimated Changes in Cost or Burden in Terms of Hours

	One time implementation costs	Recurring annual costs (savings)	Present value of recurring annual costs (savings)	Net effect: Present value of all costs (savings)
Changes in industry costs	21,000	(14,000)	(150,000)	(130,000)
Changes in NRC costs	not applicable ⁽³⁾	not significant	not significant	not significant

Table 2

Estimated Changes in Cost or Burden in Terms of Dollars

	One time implementation costs	Recurring annual costs (savings)	Present value of recurring annual costs (savings)	Net effect: Present value of all costs (savings)
Changes in industry costs	1.6 Million	(1.1 Million)	(11 Million)	(9.8 Million) ⁽⁴⁾
Changes in NRC costs	not applicable ⁽⁵⁾	not significant	not significant	not significant

Decision Rationale

The benefits of the proposed action (which consist of reduced recurring costs) outweigh the costs (which consist of one-time implementation costs).

1. A real discount rate of 7 percent was used, as specified in OMB Circular A-94. Use of a more realistic 3-percent rate would not change the basic conclusion. It would make the proposed action appear more attractive because the benefits, which are in the future, would have a greater present value.

2. NUREG/BR/1084, "Regulatory Analysis Technical Evaluation Handbook," January 1997, Page 5.55, provides a value of \$67.50 per hour in 1996 dollars for NRC technical personnel. (Those involved in rulemaking and reviewing LERs would be technical personnel.) This includes allowances for benefits, management and secretarial support. This translates into about \$78 per hour in current dollars. The same figure is appropriate for licensee technical personnel who will be involved in procedure writing, training and reporting.

3. The NRC's implementation costs consist of developing the rule. Thus, they have already been expended by the time the Commission decides on whether to approve the final rule.

4. This number appears inconsistent with preceding numbers due to roundoff.

5. See Footnote 3.