Emergency Classification Timeliness

A. Definition of the Regulatory Problem.

Title 10, Section 50.47(b)(4), of the *Code of Federal Regulations* (10 CFR 50.47(b)(4)) requires that a licensee's emergency plan provide a standard emergency classification scheme. The intent of the required emergency classification scheme is to provide an effective mechanism to rapidly identify and classify abnormal plant conditions into one of the four emergency classifications. Subsequent emergency response organization (ERO) and offsite response organization (ORO) response actions and measures are implemented in a staged manner proportional to the declared emergency classification. Currently, the U.S. Nuclear Regulatory Commission (NRC) regulations do not establish a timeliness criterion for the emergency classification function as a programmatic capability or as an ERO performance standard. Timeliness of emergency classifications is critical in minimizing the consequences of a radiological emergency. If an emergency classification is delayed, the subsequent emergency response actions, including notification of OROs, may not be timely and emergency response personnel, facilities, and equipment may not be in position to respond when necessary. Ultimately this could delay implementing measures to protect the public health and safety during an emergency.

B. Existing Regulatory Framework.

The NRC emergency preparedness (EP) regulations in 10 CFR 50.47, "Emergency Plans," provide for the development of onsite and offsite EP plans and procedures that provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The planning standards in 10 CFR 50.47(b) identify requirements that onsite and offsite emergency response plans must meet. In particular, 10 CFR 50.47(b)(4) states the following:

> A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

Sections IV.B and IV.C of Appendix E, "Emergency Planning and Preparedness in Support of Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," expand on these requirements somewhat. However, neither of these sections nor 10 CFR 50.47(b)(4) establish a timeliness criterion for the emergency classification function as a programmatic capability or as an ERO performance standard.

In 1995, the NRC published Emergency Preparedness Position (EPPOS)-2, "Emergency Preparedness Position on Timeliness of Classification of Emergency Conditions," in response to the failure of some licensees to classify and declare an actual event and the staff's observations of a lack of a sense of urgency regarding emergency classifications. EPPOS-2 captured the NRC's expectation that the classification should be made promptly following indications that conditions have reached an emergency action level (EAL) threshold and that 15 minutes would be a reasonable goal for completing the classification once the indications are available to the

control room operators.[1] In EPPOS-2, the NRC also stated that this 15-minute period should not be viewed as a grace period in which a licensee may attempt to restore plant conditions and avoid declaring an emergency. The NRC did note that the 15-minute goal was not a regulatory requirement but a guideline for staff evaluation of a licensee's performance in responding to an actual radiological emergency. When the NRC developed the voluntary EP Cornerstone Reactor Oversight Program performance indicators, the industry incorporated comparable guidance into NEI 99-02, "Regulatory Assessment Performance Indicator Guideline." The NRC endorsed the use of NEI 99-02 in RIS 2000-08, "Voluntary Submission of Performance Indicator Data," dated March 28, 2000. The staff incorporated comparable guidance in the Emergency Preparedness Significance Determination Process (Appendix B to MC-0609). Nonetheless, there continues to be instances of untimely classifications during actual events.

C. Preliminary Options Considered to Resolve the Problem.

1. Take no action.

This option would maintain the status quo and there would continue to be no explicit regulatory requirement regarding the timeliness of emergency classifications. The NRC would continue to rely on the voluntary industry performance indicators for drills and exercises and existing regulatory guidance. Clear expectations for licensees and the NRC regarding emergency classification timeliness would continue to be impaired because of the absence of an explicit classification timeliness performance standard in the regulations. Because licensees may not be able to provide reasonable assurance that adequate protective measures, such as timely classification of emergencies, may be taken in the event of a radiological emergency and that this could ultimately impact implementing measures to protect the public during an emergency, the staff considered this option to be unacceptable.

2. Use voluntary program.

The NRC could continue to rely on the industry-developed performance indicators for drills and exercises. NEI 99-02 provides a Drill and Exercise Performance Indicator (DEP PI). This indicator monitors the timeliness and accuracy of licensee performance during simulator training evaluations, drills and exercises, actual events, and other performance-enhancing experiences that provide opportunities to evaluate ERO performance in classification, notification, and development of protective action recommendations (PARs). The associated DEP PI guidance provides a timeliness goal of 15 minutes for classifications. The NRC recognizes that the licensee's self-assessment of ERO performance, and the trending of that performance, allows a licensee to identify performance weaknesses and to take necessary corrective actions that serve to increase the likelihood of acceptable performance during an actual event. Should a licensee's

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1Reference is made to "control room operators" and "control room" for convenience. The staff notes that the proposed rule language will need to be broad enough to capture classifications performed in the Technical Support Center or other emergency response facilities as described in the licensees' plans.

performance decrease below certain thresholds, the licensee's program would enter the regulatory response column and the NRC would perform baseline and supplementary inspections.

Nonetheless, the staff considered this option to be unacceptable because the absence of an explicit classification timeliness criterion in the regulations would be inconsistent with the need for clear expectations for licensees and the NRC regarding emergency classification timeliness. In addition, the structure of the DEP PI has the effect of averaging the performance in all classifications, notifications, and PAR developments observed in all performance opportunities, which may mask lesser performance in classifications during actual events. Also, the basis for the DEP PI relies on the ability of the licensees to continue to conduct challenging drills and exercises. The timeliness expectation incorporated into NEI 99-02 is not strictly enforceable because it is not explicitly driven by a regulation.

3. Implement proposed regulation.

The staff believes that the proposed amendment of the regulations is the best course of action to ensure that licensees can and will complete emergency classifications in a timely manner in the event of a radiological emergency. The staff proposes to amend 10 CFR 50.47(b)(4), Sections IV.B, IV.C, or IV.D of Appendix E to 10 CFR Part 50, or a combination thereof to require licensees to have the capability to classify and declare the emergency within 15 minutes of the availability of information that an EAL threshold may be exceeded. EPPOS-2 would be retracted.

4. Implement some other regulatory scheme.

It is possible that some other regulatory scheme would be more effective and efficient than the one proposed while continuing to provide the desired assurance that emergency classifications can and will be completed in a timely manner in the event of a radiological emergency. The NRC rulemaking process offers the opportunity for the public and the nuclear power industry to comment on the proposed changes to the regulations. If another viable scheme is proposed during this process, the staff will review it and, if it cold adequately protect public health and safety, propose its implementation to the Commission for consideration.

D. Technical References and Supporting Documents

- 10 CFR 50.47(b).
- 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," Section IV.D.
- 44 CFR 350.5.
- EPPOS-2, "Emergency Preparedness Position on Timeliness of Classification of Emergency Conditions."

- NEI 99-02, “Regulatory Assessment Performance Indicator Guide.”
- NUREG-0654/FEMA-REP-1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” November 1980.
- MC-0609, Appendix B.

E. Potential Response from Stakeholders

In informal draft correspondence, NEI indicated that the industry believes that rulemaking is not needed and that the current criteria for timely classification are appropriate. NEI also expressed concern that a 15-minute timeliness criterion could force an improper classification when the licensee approaches the end of the 15-minute time period.

The Federal Emergency Management Agency and State and local authorities will likely support this rulemaking initiative because timely classifications would benefit OROs. Meetings with public advocacy groups and the general public during the development of SECY-06-0200, “Results of the Review of Emergency Preparedness Regulations and Guidance,” dated September 20, 2006, did not reveal any concerns related to classification timeliness. This may be because the public is not aware of the issue. The public will likely support this NRC rulemaking if it is perceived as improving the timeliness of emergency declarations and adding transparency to the regulations.