

December 6, 2011

MEMORANDUM TO: Jessie Quichocho, Chief
Research and Test Reactor Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

FROM: Duane Hardesty, Project Manager **/RA/**
Research and Test Reactor Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: CATEGORY 2 PUBLIC MEETING TO DISCUSS THE
REGULATORY BASIS FOR STREAMLINING NON-POWER
REACTOR LICENSE RENEWAL AND EMERGENCY
PREPAREDNESS

DATE & TIME: Monday, December 19, 2011
1:30 p.m. – 4:30 p.m.

LOCATION: U.S. Nuclear Regulatory Commission
11555 Rockville Pike, Room O13B4
Rockville, MD 20852

PURPOSE: The purpose of the meeting is to gather comments and discuss
the proposed options for developing the regulatory basis for
streamlining non-power reactor license renewal and emergency
preparedness.

CATEGORY 2: * This is a Category 2 Meeting: The public is invited to participate in
this meeting by discussing the regulatory issues with the agency
and asking questions at designated points identified on the
agenda during the meeting.

The NRC provides reasonable accommodation to individuals with
disabilities where appropriate. If you need a reasonable
accommodation to participate in this meeting, or if you need
meeting information in alternative format (e.g. Braille, large print),
please notify one of the meeting contacts listed below.
Determinations on requests for reasonable accommodation will be
made on a case-by-case basis.

MEETING CONTACTS: Duane Hardesty, NRR/DPR Beth Reed NRR/DPR
(301) 415-3724 (301) 415-2130
Duane.Hardesty@NRC.gov Elizabeth.Reed@NRC.gov

* Commission's Policy Statement on "Enhancing Public Participation in NRC Meetings" (67 FR 36920, May 28, 2002)

Pre-registration: Pre-registration for the meeting is not necessary. However, the meeting contacts request that members of the public that will be attending the meeting pre-register so that adequate seating and meeting materials can be arranged for all attendees. For details, please e-mail or call one of the NRC meeting contacts listed or the toll-free number, 1-800-368-5642, and ask the operator for a connection to one of the meeting contacts. Those interested in pre-registering should do so as soon as possible, but no later than December 15, 2011.

Teleconferencing: Interested members of the public unable to attend the meeting in person may participate by telephone via a toll-free teleconference. For details, please e-mail or call one of the NRC meeting contacts listed or the toll-free number, 1-800-368-5642, and ask the operator for a connection to one of the meeting contacts. Those interested in participating in this meeting by teleconference should call or email one of the meeting contacts as soon as possible, but no later than December 15, 2011.

Web conferencing: Interested members of the public unable to attend the meeting may participate remotely on the internet. For details, please e-mail or call one of the NRC meeting contacts listed or the toll-free number, 1-800-368-5642, and ask the operator for a connection to one of the meeting contacts. Those interested in participating in this meeting by web conference should call or email one of the meeting contacts as soon as possible, but no later than December 15, 2011.

PARTICIPANTS:

Participants from the NRC include members of the Office of Nuclear Reactor Regulation (NRR).

NRC

D. Hardesty, NRR
B. Reed, NRR
C. Montgomery, NRR
A. Adams, NRR

Enclosures:
Meeting Agenda
Regulatory Basis Options

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DATE	12/6/11	12/6/11	12/6/11

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**Agenda for Public Meeting
United States Nuclear Regulatory Commission**

**December 19, 2011
1:30 PM – 4:30 PM**

PURPOSE: The purpose of the meeting is to gather comments and discuss the proposed options for developing the regulatory basis for streamlining non-power reactor license renewal.

Time	Topic	Led By
01:30 PM – 01:35 PM	Opening Remarks	NRC
01:35 PM – 01:45 PM	Background on development of Regulatory Basis	NRC
01:45 PM – 02:00 PM	High level discussion of options for Regulatory Basis	NRC
02:00 PM – 03:45 PM	Detailed discussion of options for Regulatory Basis	NRC
03:45 PM – 04:15 PM	Invitation for Public Discussion	NRC
04:15 PM – 04:25 PM	Schedule and Next Steps	NRC
04:25 PM – 04:30 PM	Conclusion	NRC

Representatives from the NRC will discuss and answer questions about the regulatory basis for streamlining non-power reactor license renewal and non-power reactor emergency preparedness. Comments on the questions and discussion should be submitted to the NRC using the NRC FORM 659, "NRC Public Meeting Feedback." The form will be available at the meeting or can be obtained by calling or emailing one of the meeting contacts.

Options Being Considered in the Regulatory Basis

The NRC staff is seeking stakeholder comment on the options that will be analyzed in a regulatory basis for a rulemaking to address the non-power reactor license renewal process and non-power reactor emergency preparedness.

OPTIONS FOR LICENSE RENEWAL

Option 1: No action

Continue with the current regulations and guidance, including “Interim Staff Guidance (ISG) for the Streamlined Research Reactor License Renewal Process” (ML092240244), and NUREG-1537, “Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors” (ML042430055, ML042430048). The regulatory basis will evaluate use of the existing license renewal process.

Option 2: Non-regulatory approaches

Continue with current regulations for license renewal but modify NUREG-1537 and the ISG to reflect lessons learned from applying the ISG. In addition, this option would consider revising NUREG-1537 to include an updated regulatory “road map” for license renewal. The regulatory basis will evaluate these non-regulatory approaches to addressing license renewal.

Option 3: Rulemaking adopting a streamlined license renewal process

Undertake rulemaking to implement a graded-approach to license renewal, consistent with the ISG. Some modifications would be made to the process embodied by the ISG based on lessons learned by the staff while applying the ISG. The regulatory basis will evaluate adoption of a graded-approach to license renewal through rulemaking. The regulatory basis also will consider the following as possible enhancements to the streamlined process:

- Changes to the timely renewal provision in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 2.109 to allow for an adequate acceptance review by the NRC staff and, if needed, time for revisions and resubmission of the application by the licensee. The acceptance review process may reduce the number of requests for additional information (RAIs) during the application review process.
- Segregation of non-power reactor license renewal regulations into a separate Part or Subpart of 10 CFR. This feature would not add further requirements on licensees; instead, it would improve the presentation and organization of regulations.
- Periodic updates to the Safety Analysis Report (SAR). Because non-power reactors are not required to update their SARs periodically, the scope of a license renewal application currently must address issues related to updating the licensing basis, similar in scope and depth to the initial licensing. If SARs are kept up-to-date, the burden on licensees may be reduced at renewal time. Periodic updates may also allow the staff to consider

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renewal periods greater than the current 20 years, potentially reducing the overall renewal burden on licensees.

Option 4: Rulemaking eliminating license terms (and license renewal)

Although the Atomic Energy Act does not establish a license term limit for non-power reactor (NPR) licenses, 10 CFR 50.51(a) states that a license “will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from date of issuance.”

Consequently, no initial or renewed license period may be greater than 40 years. To eliminate license renewals for non-power reactors, or reduce their frequency, the NRC could undertake a rulemaking that would revise Section 50.51(a). The regulatory basis will evaluate a rulemaking to eliminate/extend the license term for non-power reactors, along with appropriate methods enabling licenses to remain in force without expiration. Considerations to be evaluated in the regulatory basis include the following:

- *Periodic updates to the SAR.* The NRC could require licensees to update their SARs periodically in order to maintain the licensing basis over an extended period. This is similar to the Army Reactor Program and the Department of Energy requirement for periodic updates to SARs for their non-power reactor facilities.
- *Periodic safety reviews (PSRs).* The NRC’s inspection program could be enhanced to place additional focus on surveillance, maintenance and repair, and any changes to non-power reactor facilities made under 10 CFR 50.59. This is similar to the Army Reactor Program and the Department of Energy’s use of periodic inspections to assess regulatory compliance at non-power reactor facilities. In addition, some member states (MS) of the International Atomic Energy Agency (IAEA) perform systematic safety reassessments, referred to as PSRs, to assess the cumulative effects of plant aging and plant modifications, operating experience, new technical developments and new siting aspects.
- *Transparency.* The NRC would need to develop a methodology to have periodic public input commensurate with revised license terms particularly in the case of enabling licenses to remain in force without expiration.

OTHER OPTIONS (BEYOND LICENSE RENEWAL)

Option 5: Segregate NPR licensing regulations

As currently written, the licensing regulations for non-power reactors are dispersed across several sections within Title 10 of the CFR. In addition, there are several relevant NRC guidance documents and various standards issued by the American National Standards Institute. The most consolidated source of information regarding non-power reactor licensing is within a guidance document (i.e., NUREG-1537), but it can be difficult to tie the guidance back to specific regulatory requirements. The regulatory basis will evaluate segregation of existing non-power reactor licensing regulations into a separate Part.

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Option 6: Clarify the applicability of regulations for non-power reactors

There are sections of the regulations that could use technical updating and clarification to ensure that the rule applies appropriate technical standards to the various types or classes of non-power reactors (e.g., power level, research or test reactor). These sections include 10 CFR 50.30(f), 50.58(a), 50.71(b), Appendix C to Part 50, 51.20(b)(2), 51.21, and Part 100. The regulatory basis will evaluate the need to better document the technical basis for power level thresholds (which affects applicability).

Option 7: Revise definitions and terminology for non-power reactors

The definitions and terminology in 10 CFR 50.2, 10 CFR 50.22, and 10 CFR 170.3 associated with NPRs are inconsistent and may contribute to difficulty interpreting the regulations. The regulatory basis will evaluate the need to redefine the terms associated with non-power reactor, testing facility, test reactor, and commercial research and test reactors.

Option 8: Establish appropriate accident dose criteria for research reactors

The accident dose standards in 10 CFR Part 100 apply to test reactors and not research reactors. The regulations lack accident dose standards for research reactors. The staff currently applies the standards in 10 CFR Part 20 to research reactors. The regulatory basis will evaluate the need for dose standards specific to research reactors.

Option 9: Revise 10 CFR 50.59 to apply to permanently shutdown non-power reactors without fuel

The wording of 10 CFR 50.59(b) creates an issue concerning the applicability of 10 CFR 50.59 to permanently shut down non-power reactors where the fuel has been removed from site. The regulation states that 10 CFR 50.59 is applicable to licensees “whose license has been amended to allow possession of nuclear fuel but not operation of the facility.” When fuel is removed permanently from a facility, a possession-only license amendment is issued which removes the authority from the licensee to possess nuclear fuel. The current wording of 10 CFR 50.59(b) results in 10 CFR 50.59 not applying to the license. The regulatory basis will evaluate the need to revise 10 CFR 50.59 to allow continued applicability of 10 CFR 50.59.

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CONSIDERATIONS FOR EMERGENCY PREPAREDNESS

An effective Emergency Preparedness (EP) program can affect the outcome of an accident in that the accident may be mitigated by the actions of the Emergency Response Organization (ERO) or, in the worst case, consequences to the public could be reduced through the effective use of protective actions. EP cannot affect the probability of the initiating event, but a high level of EP increases the probability of accident mitigation if the initiating event proceeds beyond the need for initial operator actions. An enhancement to the level of EP enhances protection of public health and safety through improvements in the response to initiating events.

In the Staff Requirements Memorandum (SRM) to SECY-06-0200, dated January 8, 2007 (ADAMS Accession ML070080411), the Commission approved the NRC staff's recommendation to pursue rulemaking and guidance changes for enhancements to the EP program. In the proposed rule (RIN 3150-AI10, Docket ID: NRC-2008-0122), the NRC asked for public comment on three items directed specifically towards non-power reactors; emergency planning functions, Emergency Action Levels (EALs) for hostile action, and emergency declaration timeliness. After reviewing the comments the NRC determined that further analysis and stakeholder interactions were needed for two items prior to proposing changes to the requirements for non-power reactors.

Emergency plan implementation functions

In the proposed rule (RIN 3150-AI10, Docket ID: NRC-2008-0122), the NRC asked for public comment on whether the NRC should add a requirement for non-power reactor licensees to perform a detailed analysis demonstrating that on-shift personnel can perform all assigned emergency plan implementation functions in a timely manner without having competing responsibilities that could prevent them from performing their emergency plan functions. The NRC received several comments that opposed a regulation imposing this requirement. The NRC agrees that this requirement is not necessary for non-power reactor licensees and is therefore not being considered for rulemaking.

Hostile action event Emergency Action Levels

In the proposed rule (RIN 3150-AI10, Docket ID: NRC-2008-0122), the NRC asked for public comment on whether the NRC should expand to non-power reactor licensees the requirement for power reactor licensees to have hostile action event EALs. The NRC received several comments on these issues. The NRC has determined that further analysis and stakeholder interactions are needed prior to changing the requirements for non-power reactor licensees. Therefore, the NRC did not include a requirement in the final rule (RIN 3150-AI10, Docket ID: NRC-2008-0122) for non-power reactor licensees to have hostile action EALs. However, the staff will consider the need for regulations in a separate technical basis for the inclusion of hostile action event EALs in non-power reactor emergency plans.

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Emergency Declaration Timeliness

In the proposed rule (RIN 3150-AI10, Docket ID: NRC-2008-0122), the NRC asked for public comment on whether the NRC should add requirements for non-power reactor licensees to assess, classify, and promptly declare an emergency condition within 15 minutes. The NRC received several comments on the necessity of this requirement for non-power reactor licensees. Therefore, the NRC did not include non-power reactor licensees in the final rule (RIN 3150-AI10, Docket ID: NRC-2008-0122) to assess, classify, and declare an emergency condition within 15 minutes and promptly declare an emergency condition.

However, the NRC believes there may be a need for the NRC to be aware of security related events early on so that an assessment can be made to consider the likelihood that the event is part of a larger coordinated attack. The NRC also believes declarations for non-security related events should be made in a timely fashion, but not necessarily with the same urgency as security related events. For example, in 2008 a tornado damaged the building that houses a non-power reactor. NRC assistance, which was coordinated between NRC headquarters and NRC Region IV, could have been deployed earlier and with more detailed information if the emergency information was available to the NRC earlier.

While the regulations do not provide an explicit time limit for classifying emergencies, they do imply that classification should be made without delay. A revised regulatory framework would consistently enforce the expectation that emergency classifications should be made without delay. Accordingly, the staff is considering the need for regulations that would clarify the time for declaring an emergency and making notifications for both a hostile action and non-security related events. This would entail the incorporation of EAL timeliness for non-power reactors into the regulations.

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