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United States Nuclear Regulatory Commission

Protecting People and the Environment

Office of Nuclear Reactor Regulation
Research and Test Reactors Licensing Program

Streamlining of the Research and Test Reactor License Renewal Process

June 4, 2009

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Webinar Audio Information

- The Toll-Free number to participate in the audio portion of the Webinar is:
  - Toll Free: 888-790-2049, participant code: 40801
- Please do not use the dial-in number indicated on the webinar invitation.
- This number will not be monitored.

Pubic Meeting Information

- This is a Category III Public meeting on the streamlined review process for research reactor license renewal applications. In addition to industry representatives, licensees, and vender organizations, non- government organizations, private citizens, and other interested parties are encouraged to participate.

- This public workshop is being transcribed and the minutes of the meeting will become part of the public record.

- Please sign the attendance sheet indicating your organizational affiliation, if any, and contact information. Webinar participants, please ensure your login credentials correctly identify you.

- If you would like to ask questions or make comments, please identify yourselves and your organizational affiliation.

- All meeting participants are encouraged to submit their comments in writing in response to *the Federal Register* notice announcing the Proposed Process Change and via the NRC Public Meeting Feedback form.

Introduction

- Public Meeting Information
- Introductions and Welcome
- Opening Thoughts

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Purpose

- To discuss with stakeholders the draft interim staff guidance (ISG) for research reactor license renewal.
  - License Renewal Background
  - Details of the ISG
  - Focused Review for License Renewal

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Status of License Renewals

- In-House: 21
- 18 are considered to be in backlog.
- Three reviews (Kansas, Ohio and Oregon) completed in FY 08.
- One completed (Missouri University of Science & Technology) so far FY 09.

License Renewal History

- Prior to 1976 renewal was administrative process.
- 1976 OGC opinion discontinued administrative renewals.
- Late 1990s, current wave of renewal applications began.
  - Low PM staffing in RTR branch and higher-priority work (post 9-11) lead to deferral of renewal reviews.
  - Some licensees had difficulty answering questions.
- SECY-08-0161, “Review of Research and Test Reactor License Renewal Applications” dated October 24, 2008.
- Staff Requirements Memorandum (SRM) dated March 26, 2009.
- Public meetings held in September 2008 and March 2009.

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Current Regulatory Structure

- AEA prescribes "minimum regulation" necessary to ensure public health & safety.
- Part 54 License Renewal Process for power reactors does not apply.
- Application requirements of Part 50 govern content of applications for RTR operating licenses.
  - Generally no distinction between contents of initial application and renewal.
- A superseding renewed license must be issued if requested renewal will extend license beyond 40 years.

Draft Interim Staff Guidance

SRM directed staff to:

- Use graded approach
- Focus on most significant aspects of renewal
- Meet regulatory requirements
- Do not unnecessarily reanalyze items
- Use insights from security assessments

Goal is to eliminate backlog by Sept. 2010.

ISG meets SRM direction.

Draft Interim Staff Guidance

Graded approach with 2 tiers used.

- 2 MW(t) and greater power will have traditional review.
- Less than 2 MW(t) power will undergo focused review.

2 MW(t) is a long-standing transition point in research reactor regulation.

- Used in inspection program (Class I vs. Class II facilities).
- Used in emergency planning (EPZ).
- Used in security (10 CFR 73.60(f)).

Draft Interim Staff Guidance

Aspects of the Focused Review:

- Primary review areas –
  - Reactor design and operation
  - Accident analysis
  - Technical specifications
- Secondary review areas –
  - Radiation Protection (inspection results informed)
  - Financial
- Environmental review

Draft Interim Staff Guidance

Aspects of the Focused Review

- Will review other aspects of SAR as needed to support focused review areas (e.g. engineered safety features to support accident review, technical specification bases).

- NRC may develop independent neutronic and thermal-hydraulic calculations as part of our independent evaluation of the SAR.

Draft Interim Staff Guidance

Aspects of the Focused Review

- Except to carry out reviews in primary and secondary review areas, in-depth reviews will not be made of :
  - Site characteristics
  - Design of structures, systems and components
  - Reactor coolant systems
  - Instrumentation and control systems
  - Electrical power
  - Auxiliary systems
  - Experimental facilities and programs
  - Conduct of operations

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Treatment of Review Issues

- Requested changes outside of license renewal.
  - Request licensee to identify by RAI.
  - Will determine if reviewed as part of license renewal or as separate action.

- Use of past reviews.
  - Can be last renewal, initial licensing or HEU-LEU conversion.
  - Reviewer can use past NUREG document.
  - HEU-LEU conversions are recent.
  - Initial licensing reviews may be very old and difficult to use.

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Treatment of Review Issues

- Applications in progress
  - Licensee work on outstanding requests for additional information (RAIs) should stop.
  - New RAIs will be based on focused review if needed.
  - RAIs that have been answered will be reviewed.
  - NRC will follow-up on issues identified.
- Opportunity for hearing
  - Applications that have been noticed will not be noticed again because of change to review process.

Draft Interim Staff Guidance

Treatment of Review Issues

- Power Increases
  - Staff will review license renewal and power increase together using the traditional method.
- Safety Evaluation Report (SER)
  - SER format will reflect focused review.
  - Primary evaluation chapters will be reactor, technical specifications and accident analysis.

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Traditional review based on review being nearly complete.

- NIST
- MIT (power increase)
- Penn State

Traditional review based on power level.

- MURR
- Rhode Island

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Traditional review based on power increase.

- Utah
- Reed
- Purdue (not backlog)
- Dow (not backlog)

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- Focused review

Texas A&M TRIGA	Texas A&M AGN
UC Irvine	Wisconsin
Maryland	Washington State
Florida	RPI
AFRRI	Aerotest
New Mexico	USGS (not backlog)

Focused ISG Review

Review plan based on NUREG-1537.

Technical specification (TS) review based on NUREG-1537 and ANS/ANSI 15.1 – 2007.

NRC reviewer will review entire SAR with focus on significant areas for renewal.

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QUESTIONS

-or-

COMMENTS