

September 20, 2002

MEMORANDUM TO: Michael Lesar, Chief  
Rules and Directives Branch  
Division of Administrative Services  
Office of Administration

FROM: Farouk Eltawila, Director /RA/  
Division of Systems Analysis and Regulatory Effectiveness  
Office of Nuclear Regulatory Research

SUBJECT: PUBLIC MEETING NOTICE FOR "WORKSHOP TO DISCUSS KEY  
ISSUES RELATED TO THE LICENSING OF FUTURE NON-LIGHT  
WATER REACTORS"

Attached is a signed copy of a Federal Register notice for a meeting to be held on October 22–23, 2002, for your transmittal to the Office of the Federal Register for Publication. Five additional copies of the signed notice are attached for your use; as is a 3.5" diskette containing the notice Word Perfect 8 file.

If you need any additional information concerning this notice, please contact me at (301) 415-7499.

Attachments: As stated (5 copies)

cc w/ atts. (via e-mail)  
PMNS  
JWermiel  
SNewberry  
MEI-Zeftawy  
EWilliamson, OGC

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OFFICE	RES		D:DSARE	
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DATE	09/19/02*		09/20/02*	

## Workshop on Key Issues Related to the Licensing of Future Non-light Water Reactors

AGENCY: Nuclear Regulatory Commission

ACTION: Notice of public workshop

SUMMARY: The NRC has underway preapplication reviews of advanced reactor designs. The purpose of these preapplication reviews is to identify, early in the design process, key safety issues and a path to their resolution. For advanced non-light water reactors, several such key issues were identified and described in SECY-02-0139. The purpose of this workshop is to discuss the issues described in SECY-02-139, including options for their resolution.

DATES: The workshop will be held on October 22–23, 2002 – 1:00 p.m. to 5:00 p.m. on October 22, 2002; 9:00 to 5:00pm on October 23, 2002.

ADDRESS: The workshop will be held at the Double Tree Hotel, 1750 Rockville Pike,  
Rockville, Maryland

FOR FURTHER INFORMATION CONTACT: Dr. Farouk Eltawila, Director, Division of Systems Analysis and Regulatory Effectiveness, Office of Nuclear Regulatory Research, Mail Stop T-10 E32, telephone (301)415-7499; Internet: FXE@nrc.gov, U.S. Nuclear Regulatory Commission, Washington D.C. 20555-0001.

For material related to the meeting, please contact U.S. NRC Public Affairs Office (301) 415-8200.

## SUPPLEMENTARY INFORMATION:

### Background

In a paper dated July 22, 2002, (SECY-02-0139, "Plan for Resolving Policy Issues Related to Licensing Non-Light Water Reactors") the Nuclear Regulatory Commission (NRC) staff identified seven issues with potential policy implications resulting from work to date reviewing non-light water reactors. These seven issues are:

- How should the Commission's expectations for enhanced safety be implemented for future non-LWRs?
- Should specific defense-in-depth attributes be defined for non-LWRs?
- How should NRC requirements for future non-LWR plants relate to international safety standards and requirements?
- To what extent should a probabilistic approach be used to establish the plant licensing basis?
- Under what conditions, if any, should scenario-specific accident source terms be used for licensing decisions regarding containment and site suitability?
- Under what conditions, if any, can a plant be licensed without a pressure-retaining containment building?
- Under what conditions, if any, can emergency planning zones be reduced, including a reduction to the site exclusion area boundary?

### Discussion

Options for resolving these issues are under development and recommendations on their resolution are due to the Commission in December 2002. The options under consideration are listed in the agenda along with key considerations for discussion. To assist in

developing and evaluating options and preparing recommendations, the NRC staff is planning to hold a workshop to discuss and solicit feedback on the issues and options for their resolution, including advantages and disadvantages.

#### Key Considerations for Discussion

Feedback is sought specifically on:

- Are the options for resolution being considered appropriate?
- Are there other options which should be considered?
- Which option(s) should be pursued and why?
- Which options should not be pursued and why?

#### Workshop Agenda

October 22, 2002

1:00–1:15 Introduction (NRC staff)

1:15–1:45 Overview of the Seven Issues and Options for Their Resolution (NRC staff)

Discussion of Issues and Options:

1:45–3:45 Issue 1: Expectations for Safety

- Options for Resolution:
  - Maintain current level of safety
  - Require an enhanced level of safety
  - Require an enhanced level of confidence in the design
- Key Considerations:
  - Should the Commission's Safety Goal Policy apply on a site or a per plant basis?

- Should safety be improved for future plants to ensure the population of plants that maintain safety?

3:45–4:00 BREAK

4:00–5:00 Issues 2: Defense-in-Depth

- Options for Resolution:
  - case-by-case determination
  - develop a description of defense-on-depth attributes
  - develop a process for determining defense-in-depth measures
- Key Considerations
  - IAEA description

October 23, 2002

9:00–10:00 Issue 3: Use of International Codes and Standards

- Options for Resolution:
  - review and endorse international codes and standards only as needed to review an application
  - review and endorse existing international codes and standards, whenever practical to fill gaps in the NRC infrastructure
  - participate in the development of and endorse international codes and standards, whenever practical to fill gaps in the NRC infrastructure
  - harmonize, as much as possible, NRC licensing requirements with other regulatory bodies
- Key Considerations:
  - cost and schedule

10:00–10:15 BREAK

10:15–11:15 Issue 4: Event Selection and Safety Classification

- Options for Resolution:
  - deterministic selection of events to be considered in the design and safety classification
  - probabilistic selection of events to be considered in the design and safety classification.
  - combination of deterministic and probabilistic
- Key Considerations:
  - probabilistic risk assessment quality and completeness

11:15–12:30 LUNCH

12:30–1:30 Issue 5: Licensing Source Term

- Options for Resolution:
  - use a bounding source term representative of core damage accident (LWR practice)
  - use a range of source terms corresponding to the design basis accident scenerios
- Key Considerations:
  - ensuring plant and fuel performance over the life of the plant

1:30–2:30 Issue 6: Containment vs. Confinement

- Options for Resolution:
  - require non-LWRs to have a pressure retaining containment building
  - allow a design without a pressure retaining containment provided certain performance criteria are met

- Key Considerations:
  - confidence in accident selection and source term

2:30–2:45 BREAK

2:45–3:45 Issue 7: Emergency Preparedness

- Options for Resolution:
  - retain current requirements and emergency planning zone size
  - allow a reduction in emergency planning zone size
- Key Considerations:
  - confidence in accident selection and source term

3:45–5:00 General Discussion and Wrapup

Dated at Rockville, Maryland, this 20th day of September 2002.

For the Nuclear Regulatory Commission

/RA/

Farouk Eltawila, Director  
Division of Systems Analysis and Regulatory Effectiveness  
Office of Nuclear Regulatory Research