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UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Consideration of Economic Consequences within the NRC's Regulatory Framework

Public Meeting

July 29, 2013

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Logistics

- Category 3 Public Meeting
- Emergency Evacuation Plan
- Feedback Forms

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Ground Rules

- Speak one at a time; identify yourself.
- Be respectful of speakers/participants.
- Limit interruptions (e.g., cell phones, side conversations).
- You may submit questions via “chat” function in GoToMeeting.
- Questions and discussion encouraged.

Meeting Purpose

Provide external stakeholders:

- Information on the Commission's direction contained in the SRM for SECY-12-0110, "Consideration of Economic Consequences within the U.S. Nuclear Regulatory Commission's Regulatory Framework."

- An opportunity to ask the NRC staff clarifying questions.

- An opportunity to provide the NRC staff with their thoughts on what could be potential policy issues as the NRC develops SECY paper in response to SRM-SECY-12-0110.

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Outline

- Meeting Context
- NRC's legal authority to consider property damage
- Commission Paper on Economic Consequences (EC) (SECY-12-0110)
- Commission SRM on SECY-12-0110
- Staff's preliminary approach
- Questions & General Discussion

Meeting Context

- Accident at Fukushima Dai-ichi initiated discussion of how NRC considers economic consequences caused by a significant unintended radiological release from an NRC-regulated activity.
- Stakeholder Interactions
  - Public Meetings held in May and August, 2012
  - Commission Briefing on September 11, 2012
  - Advisory Committee on Reactor Safeguards (ACRS) in October and November 2012
- SECY-12-0110, “Consideration of Economic Consequences within the U.S. Nuclear Regulatory Commission’s Regulatory Framework,” August 14, 2012.
- Commission provided direction on SECY-12-0110 on March 19, 2013.
- **Today’s meeting is an opportunity for public engagement on this topic.**

Legal Authority

- NRC requirements relating to adequate protection concern radiological health and safety and common defense and security.
  - NRC must find reasonable assurance of adequate protection before it can issue a license or amend a previously issued license.
  - Adequate protection is a safety standard.
- Distinct from adequate protection, the NRC has authority under the Atomic Energy Act to “minimize danger” to property.
  - Offsite Property Damage (OPD) can include:
    - Costs of damaged or destroyed property,
    - Relocation costs, and
    - Loss of business revenues

Commission Paper on Economic Consequences

- SECY-12-0110, "Consideration of Economic Consequences within the U.S. Nuclear Regulatory Commission's Regulatory Framework," August 14, 2012.[1]
  - Addressed the policy question: *To what extent, if any, should NRC's regulatory framework be modified regarding its consideration of the economic consequences of an unintended release of licensed nuclear materials to the environment?*
  - Described the current offsite property damage considerations in NRC analyses
  - Concluded that the current regulatory framework is sound and affords sufficient flexibility
  - Recommended enhancing cost-benefit guidance

[1]ADAMS number ML12173A479.

Commission Direction[1]

- The NRC's current approach to the issue of land contamination from reactor accidents is sound
- Continue with ongoing efforts to update guidance documents within the current regulatory framework
  - Dollar Per Person-Rem conversion factor policy
  - Replacement energy cost

[1]SRM-SECY-12-0110: http://www.nrc.gov/reading-rm/doc-collections/commission/srm/2012/2012-0110srm.pdf
ADAMS No.: ML13079A055

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Commission Direction continued

- **Develop notation vote paper on plan for updating regulatory analysis guidance**
- Describe how costs and benefits are addressed for different types of NRC-regulated activities
- Document comparison of U.S. & Japanese regulatory requirements in effect at time of Fukushima accident
- Report plan to dissolve the Near Term Task Force Steering Committee
- Provide any cost benefit model developed for use in guidance documents to address offsite property damage

Staff's preliminary approach

- Plan for updating cost-benefit guidance documents
- Identification of a broad set of potential policy issues
- Identification of potential changes to current methodologies and tools
- Paper due to Commission in December 2013

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Plan for updating cost-benefit guidance

- Complete update to Replacement Energy guidance
- Complete update to Dollar per Person-Rem Conversion Factor Policy
- Non-policy revisions to Regulatory Analysis Guidance and Technical Handbook
- Identification of differences in guidance for different NRC-regulated activities
- After identification of differences, create plan to implement further guidance changes

Items for general discussion

- SRM-SECY-12-0110 identified staff look at particular decontamination level in cost-benefit analyses
  - What should these levels be? Why?
- Discount rates can have a large impact on present-value benefits and costs
  - In a low interest rate environment, should the discount rates be revised/changed from OMB guidance?
- Current guidance has regulatory analyses evaluating accident effects up to 50 miles from the site. Analyses are performed beyond 50 miles as sensitivity studies.
  - Under what conditions should the analysis extend beyond 50 miles?
  - What factors to determine how far to extend analysis?
  - Dose factor based on Linear No Threshold or a truncated value?
- Thoughts on others?

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Questions?

NRC CONTACT

If you have any questions, please contact Alysia Bone at Alysia.Bone@nrc.gov.

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Backup Slides

Considerations in NRC Analyses

- Regulatory Analysis: Structured analysis of proposed requirements, including identification of alternatives, and estimation of benefits and costs.

- Backfit Analysis: When determining if the proposed regulatory action is a substantial safety enhancement and is cost-justified.

- National Environmental Policy Act (NEPA) Analyses: Depending on the nature of the proposed regulatory or licensing action, the NEPA analysis may include consideration of potential damage to offsite property.

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Cost-Benefit Guidance

- Regulatory Analysis Guidelines, NUREG/BR-0058, Rev. 4 (2004). (Agencywide Documents Access and Management System (ADAMS) number ML042820192)
- Regulatory Analysis Technical Evaluation Handbook, NUREG/BR-0184 (1997). (ML050190193)
- Reassessment of NRC's Dollar per Person-Rem Conversion Factor Policy, NUREG-1530 (1995). (ML063470485)
- Backfitting Guidelines, NUREG-1409 (1990). (ML032230247)
- Replacement Energy, Capacity, and Reliability Costs for Permanent Nuclear Reactor Shutdowns, NUREG/CR-6080 (1993).
- Replacement Energy Costs for Nuclear Electricity-Generating Units in the United States, NUREG/CR-4012 (1997).
- MELCOR Accident Consequence Code System, Version 2 (MACCS2) (ML072350221)