

November 26, 2012

MEMORANDUM TO: Leslie S. Terry, Chief
Rulemaking Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

FROM: Richard F. Dudley, Senior Project Manager /RA/
Rulemaking Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF PUBLIC MEETING ON FUKUSHIMA
NEAR-TERM TASK FORCE RECOMMENDATION 1 ON
REGULATORY FRAMEWORK

The U.S. Nuclear Regulatory Commission (NRC) held a Category 3 public meeting on November 8, 2012. The purposes of the meeting were (1) to provide external stakeholders with the status of the NRC staff's progress on regulatory framework alternatives being evaluated to provide a recommended approach to the Commission regarding the Fukushima Near-Term Task Force (NTTF) Report Recommendation 1 on regulatory framework improvements including the Risk Management Task Force Regulatory Framework recommendations for power reactors in NUREG-2150 (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML12109A277); (2) to afford external stakeholders an opportunity to ask the NRC staff clarifying and amplifying questions on the NTTF Recommendation 1 effort; and (3) to provide an opportunity for external stakeholders and the NRC staff to exchange information on regulatory framework subject matter to facilitate more accurate and complete understanding by all parties. Details on NTTF Recommendation 1 can be found in "Recommendations for Enhancing Reactor Safety in the 21st Century, The Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," issued July 12, 2011 (ADAMS Accession No. ML111861807).

The meeting was held at the NRC headquarters in Rockville, Maryland, and was attended by 95 people. Approximately half of the participants attended the meeting in-person and the other half participated remotely through a webinar with audio teleconferencing. The attendee list is provided as Enclosure 1. Since the NRC was not accepting public comments at the meeting, a transcript of the meeting was not obtained. However, an audio recording of the discussion was made and is available on request.

The notice and agenda for the meeting can be found in ADAMS under Accession No. ML12296A052. The slides presented at the meeting are in ADAMS under Accession No. ML12314A039.

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NRC Staff Presentations

Opening remarks for the meeting were provided by Mr. Timothy J. McGinty. Mr. Richard F. Dudley then provided an overview of NTTF Recommendation 1 and summarized the NRC staff's actions to date in response to the Commission direction to provide options and a recommendation to disposition NTTF Recommendation 1. He explained that the NRC staff is seeking public feedback on the draft option summary document that was released on November 2, 2012 (ADAMS Accession No. ML12296A096).

The subsequent presentations discussed each of the options as described in the draft option summary document:

- Option 1 – Maintain existing regulatory framework
- Option 2 – Clarify role of voluntary industry initiatives
- Option 3 – Decision process for balancing risk, defense-in-depth, and safety margins
- Option 4a – Establish generic design extension category
- Option 4b – Establish design enhancement category using a plant-specific probabilistic risk assessment

Finally, there was a presentation on the cost estimates for each option.

Throughout the presentation, there were opportunities for stakeholders to make comments and ask questions about the NRC staff's approach to Recommendation 1. A summary of key comments and questions raised by stakeholders is provided as Enclosure 2.

How to Submit a Comment and How to Sign Up for E-mail Alerts

The NRC encouraged feedback, indicating that all input must be submitted through the Federal rulemaking Web site, www.regulations.gov, by December 14, 2012. To submit a comment: search for "NRC-2012-0173" and click the "Comment Now!" button. Additional information related to NTTF Recommendation 1 will be posted on www.regulations.gov in the docket folder for Docket ID NRC-2012-0173. [Regulations.gov](http://www.regulations.gov) allows interested members of the public to sign up to receive e-mail alerts when anything is added to the docket folder. To sign up: search for "NRC-2012-0173," click the "Open Docket Folder" link, click the "Sign up for E-mail Alerts" link, enter the e-mail address and select the desired frequency for e-mail alerts (daily, weekly, or monthly), and then click "Subscribe."

Enclosures:

1. Attendee List
2. Summary of Discussion and Feedback

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ADAMS Accession Nos: ML12320A245 (Pkg); ML12320A254 (Summary); ML12314A039 (Slides)

*via e-mail

OFFICE	NRR/DPR/PRMB	NRR/DPR/PRMB*	NRR/DPR/PRMB:PM	NRR/DPR/PRMB:BC	NRR/DPR/PRMB:PM
NAME	DDoyle	CEngland	RDudley	LTerry	RDudley
DATE	11/16/2012	11/16/2012	11/20/2012	11/21/2012	11/ 26/2012

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**List of Meeting Attendees
Public Meeting on NTTF Recommendation 1
November 8, 2012**

Name	Affiliation
Charles Ader	U.S. Nuclear Regulatory Commission (NRC)
Cyrus Afshar	SAIC/NuScale
Amir Afzali	Southern Company
Paul Amico*	Kleinsorg Group Risk Services, Hughes Associates
Yuya Aoyagi*	Toshiba
John Barrett*	U.S. Government Accountability Office
Gary Becker*	NuScale
Dave Blanchard*	AREI
Samuel Boakye*	Shaw Group
Biff Bradley	Nuclear Energy Institute
Edward Burns	Westinghouse Electric Company
Mark Caruso	NRC
James Chapman*	Sciencetech, Curtiss-Wright Flow Control
Nancy Chapman*	Bechtel Power Corporation
Travis Chapman*	U.S. Defense Nuclear Facilities Safety Board
Leslie Collins*	Westinghouse
Richard Correia	NRC
Jonathan DeJesus	NRC
Antonio Dias	NRC
Stephen Dinsmore	NRC
Darius Dixon*	Politico
Steven Dolley	Platts
Daniel Doyle	NRC
Ray Dremel*	Maracor Technical Services
Mary Drouin	NRC
Michael Drudy*	Westinghouse Electric Company
Richard Dudley	NRC
Judson Ellmers*	Burns and Roe, Inc.
Ken Evans*	IL Emergency Management Agency, Division of Nuclear Facility Safety
Thecla Fabian	IHS McCloskey Nuclear Business
Bryan Ford	Entergy
Jim Ford*	Luse Thermal Technologies
Bill Galyean*	NuScale
Nanette Gilles	NRC
Eric Goode*	Morningside
Sherrell Greene*	EnergX

ENCLOSURE 1

Name	Affiliation
Richard Gropp	Exelon
Kim Hawkins	NRC
Carolyn Hill*	S.M. Stoller Corporation
Tom Hiltz*	U.S. Department of Energy
Tara Inverso	NRC
Kosuke Ito	JII PRESS
Michael Jacobs*	Constellation Energy Nuclear Group
Rich Janati*	PA Department of Environmental Protection
Mari Jaworsky*	Duke Energy
Robert Joseph*	Oak Ridge National Laboratory
N. Prasad Kadambi	Kadambi Engineering Consultants
Roy Karimi	Energy Research, Inc.
Leslie Kass	Westinghouse Electric Company
Tom Kevern	NRC
Masrur Khan*	Bechtel Power Corporation
Steven Laur	NRC
Stanley Levinson	Areva
Roy Linthicum*	Exelon Nuclear
Lidia Litinski*	Honeywell
Ed Lyman	Union of Concerned Scientists
Robert MacDougall	NRC
David Marroni*	U.S. Government Accountability Office
Tim McGinty	NRC
Geary Mizuno	NRC
M. (Sami) Nalluswami	NRC retiree
Michael O'Connell*	Shaw Nuclear Services
Eric Oesterle	NRC
Glen Ohlemacher*	DTE Energy
William Orders	NRC
Christian O'Rourke*	Union of Concerned Scientists
Damian Peko*	U.S. Department of Energy
Lynne Prodoehl	Nuclear Energy Institute
Bill Reckley	NRC
Darani Reddick*	Winston & Strawn
Alison Rivera	NRC
Joseph Rivers	NRC
Chris Robinson	Southern California Edison
Michael Rodriguez	NRC
Nissia Sabri	Areva
Rabia Sarica LeClerc*	Shaw Power Group

Name	Affiliation
Thomas Scarbrough	NRC
Janet Schlueter*	Nuclear Energy Institute
Fred Schofer	NRC
Cecil Settles*	Illinois Emergency Management Agency
Martha Shields*	U.S. Department of Energy
David Skeen	NRC
Robert Slough*	Luminant Power
Jeffrey Stone	Constellation Energy Nuclear Group/ Pressurized Water Reactor Owners Group Risk Management Subcommittee
Leslie Terry	NRC
Kari Thiessen*	Canadian Nuclear Safety Commission
Doug True*	Erin Engineering
Stephen Unwin*	Pacific Northwest National Laboratory
Lee Van Buiten*	Duane Morris
Gerry van Noordennen*	Nine Mile Point Licensing
James Voss*	Los Alamos National Laboratory/ Health Physics Society
Ed Wallace*	NuScale
Chris Wasik*	NextEra Energy
David White*	Areva
Jason Zorn	Nuclear Energy Institute

* Participated via webinar or teleconference

Summary of Feedback
Public Meeting on NTTF Recommendation 1
November 8, 2012

Key comments and questions received at the meeting from stakeholders are summarized below. The NRC staff will consider feedback received at the public meeting and via www.regulations.gov in the development of the final SECY paper. The NRC staff will not be providing formal responses to comments and questions.

- What is the role of NUREG-2150, “A Proposed Risk Management Regulatory Framework” (ADAMS Accession No. ML12109A277), in the NRC staff’s consideration of Fukushima Near-Term Task Force (NTTF) Recommendation 1?
- What would be the timeline for implementing the recommended options?
- Would adoption of Option 1 preclude adopting the Risk Management Task Force (RMTF) framework?
- Will the paper explain the relationship between the NTTF Recommendation 1 and RMTF working groups?
- The NRC staff should explore the disadvantages of Option 1 further. For example, while the current framework may have “served us well,” the NRC should not rely on luck. Without the Fukushima event, would we require reliable hardened vents?
- What is meant by the second bullet under “disadvantages” on slide 17? [The bullet reads: “Does not address some improvement items (lessons from Fukushima) in an expeditious or integrated manner.” The questioner thought this was referring to NTTF Recommendations 2 – 12 and other actions, not Recommendation 1 improvements.]
- Is Option 2 (“Clarify role of voluntary industry initiatives”) referring to Technical Specifications Initiative 4b or 5b or other voluntary programs? Does it include voluntary alternative rules, such as sections 50.48(c) or 50.69 of Title 10 of the *Code of Federal Regulations* (10 CFR)?
- In the presentation on Option 3, earlier slides say to use a probabilistic risk assessment (PRA) to verify the adequacy of defense-in-depth; later, it appears PRA is optional. Please explain.
- The requirement for a PRA would depend upon who set the defense-in-depth requirements, NRC or licensee.
- Defense-in-depth is not defined. If the NRC wants to use a quantitative approach for assessing defense-in-depth adequacy, then it must be defined.
- How does this affect the recent effort to revise Regulatory Guide 1.174 to improve the characterization of defense-in-depth? What is the status of that effort?
- In the context of Option 3 (“Decision process for balancing risk, defense-in-depth, and safety margins”), what do you mean by “balancing?” For example, in decision theory one uses a utility function and tries to maximize some quantity. Another method is expert elicitation.
- Industry is spending millions of dollars on FLEX. [FLEX is a strategy developed by the nuclear energy industry to increase safety and address NRC’s post-Fukushima recommendations.] NTTF recommendation 1 appears to be adding an additional layer of requirements. Will the FLEX initiative have to be re-visited under Option 4a?
- If Option 4a is “adequate protection,” what happens to “substantial safety enhancement” backfits?

ENCLOSURE 2

- On the relationship of Recommendation 1 to FLEX, the NTF wanted Recommendation 1 first, but the Commission reversed the timeline. Also, FLEX will have lots of human actions, and therefore human factors will be important.
- On slide 65 [Option 4b Treatment Requirements], why use 10 CFR 50.69, which is a voluntary alternative? Why reduce the treatment requirements for these events from the requirements for safety-related? Why not make 10 CFR 50.69 a requirement rather than a voluntary alternative?
- Options 4a and 4b rely on core damage frequency and large early release frequency. What about economic consequences?
- There is a problem relying on PRAs because they are incomplete. Also, you could lose the mitigating equipment from a beyond design-basis earthquake.
- Industry has “real world” costs for PRA development and maintenance, which they will provide as a comment. Estimates presented at the meeting appear an order-of-magnitude low.
- In the cost estimate, what is “68”? The number of units or sites?
- It will be challenging to provide any comments by December 7 because of the Thanksgiving holiday. Can we have more time? [The comment period was extended until December 14, 2012.]
- Option 4b would take a long time to implement; this should be clearly communicated to the Commission in the SECY paper.
- Regarding Option 4a, it seems that the tools are already available for the NRC to take action without rulemaking. All that is missing is guidance to the NRC staff. This could be accomplished by writing a new standard review plan.
- The document does not address regulatory processes (e.g., use of orders versus rulemaking). Has the NRC considered process recommendations such as improving the rulemaking process?
- The regulations are a patchwork because important things are put in different places. The NRC seems to be presenting a rule that might take care of one aspect (defense-in-depth, design extension/enhancement), but will this really take care of the patchwork?
- When can we get a copy of the slides? [The meeting slides are available in ADAMS under Accession No. ML12314A039.]