

POLICY ISSUE
(Information)

March 30, 2015

SECY-15-0049

FOR: The Commissioners

FROM: James T. Wiggins, Director
Office of Nuclear Security and Incident Response

SUBJECT: STATUS OF FUKUSHIMA INCIDENT RESPONSE CORRECTIVE
ACTIONS

PURPOSE:

This memorandum provides the Commission with information on the staff's progress toward addressing items identified in the after action report (AAR) covering the experience of the U.S. Nuclear Regulatory Commission's (NRC's) internal incident response (IR) program during the response to the Fukushima Dai-ichi incident in Japan. This paper does not address any new commitments or resource implications.

BACKGROUND:

In preparing the AAR dated December 2011, "NRC Japan Incident Response After Action Report" (Agencywide Documents Access and Management System (ADAMS) Accession No ML112580203), the NRC staff collected and compiled over 1,100 comments and observations from the staff who were involved in the agency's response to the Fukushima incident caused by the March 11, 2011, Great East Japan Earthquake and Tsunami. The central positive finding of the AAR was that, overall, the NRC's IR program functioned successfully in a dynamic and challenging environment, and, more specifically, that the NRC successfully provided vital services to American citizens, the U.S. Embassy in Japan, and the Government of Japan. Following issuance of the AAR, staff conducted several internal meetings to assess the AAR observations and to define required actions under the NRC's IR corrective action process.

CONTACT: Jeff Kowalczyk, NSIR/DPR
301-287-3755

DISCUSSION:

From late 2011 through 2013, NRC IR staff's primary focus was the design, construction, and commissioning of the new Headquarters Operations Center (HOC). The staff addressed immediate AAR areas of concern, incorporated many features into plans for the new HOC, and prioritized the rest. Issues identified in the AAR spanned six broad categories:

- (1) NRC Mission
- (2) Response Structure
- (3) Procedural Issues
- (4) Planning
- (5) Communications
- (6) Technological Systems

The NRC converted these observations into actions to be resolved through the IR corrective action process. Progress on the six overarching categories identified in the AAR is outlined below; the enclosure provides a detailed list of improvement actions with a status for each.

(1) The NRC Mission

The National Response Framework (NRF) is an interagency guide for how the Nation responds to all types of disasters and emergencies. The NRF describes the principles, roles, responsibilities, and coordinating structures for delivering the core capabilities required to respond to an incident, and further describes how response efforts integrate with supporting Federal agencies' mission areas. The NRF is focused on domestic events; however, the Fukushima experience demonstrated the need for greater clarity and advance planning for nondomestic events having either: (1) impacts on U.S. citizens and interests at home or abroad, or (2) high public interest within the United States.

The NRC's IR program is designed to be compatible with the NRF. As a result, the NRC did not have established guidance or processes to facilitate an active role in responding to an international event. Since the issuance of the AAR, the NRC has participated in a U.S. interagency working group to establish response protocols and responsibilities for Federal agencies to use during response to an international event. If an international event were to occur and invoke use of these protocols, the NRC and other Federal agencies would follow these protocols to coordinate effectively and provide technical assistance to the U.S. Embassy and country in which the incident occurred, as well as provide appropriate and timely information to stakeholders.

(2) Response Structure

The Fukushima experience highlighted the fact that the amount of required information sharing and coordination among Federal agencies was far greater than what the NRC program was designed to manage. To enable more effective and efficient coordination, the staff established a new NRC headquarters response team—the Federal Coordination Team (FCT). This team integrates and coordinates the NRC response activities with Federal response activities during an event that requires NRC action. The FCT responders will deploy to other Federal agencies to provide technical assistance and liaison functions; these NRC responders have all been

trained and qualified, and the FCT has been incorporated into all response operations and recent exercises.

The Fukushima experience also illustrated a need for greater clarity in some aspects of the agency's command and control structure during response. For example, procedures used during the Fukushima response did not provide clear command and control authorities when the Executive Team director was staffed by someone other than the NRC Chairman. The NRC staff has developed draft changes to the response organization that would improve the existing structure by making it more flexible, enabling agency senior leadership to more effectively manage the response during periods of significant demand. Proposed changes clarify the roles and responsibilities of response leadership to assist senior agency leadership in exercising their authorities while ensuring that operational aspects of the response are addressed at the lowest appropriate level. The proposed changes accomplish this by restructuring the NRC Executive Team to better support the fact that the Chairman (or designee) is always the agency principal, whether physically present in the HOC or not. This restructuring creates a clearer "chain of command" for response decision making, eliminates unnecessary and confusing "turnovers" of response authorities, and permits senior agency leadership to execute their authorities while not being physically tethered to the HOC. Proposed changes also better align the management of NRC response with National Incident Management System/Incident Command System (NIMS/ICS) principles, which are the common standards toward which all local, State, and Federal response organizations are working. The staff has conducted tabletop exercises and will be planning broader exercises to further develop these concepts. The staff believes these changes will increase the NRC's consistency with accepted operational principles employed at many other Federal agencies' operations centers, ensure senior leadership is able to appropriately focus on important response decisions, and better reflect expected real-world demands on agency senior leadership during a protracted response to a nuclear event.

(3) Procedural Issues

The NRC's response to the Fukushima incident provided an opportunity to identify improvements in response processes and procedures. The NRC staff performed a program-wide review of response documentation and drafted response procedures that provide a better framework for response, as well as expanded existing processes for protracted response and multi-event integration. This improved response documentation concisely lays out a more flexible response framework, including guidance for agency participation in Federal disaster recovery efforts and more efficient methodology for managing recordkeeping with respect to potential Freedom of Information Act requests.

(4) Planning

During the Fukushima response, the NRC identified several issues concerning responder planning, including duty roster scheduling, availability of necessary expertise, and conflicts with regular work duties. The staff has improved logistics and guidance regarding shift staffing, and has increased the size of the responder pool for available expertise. This effort included improvements to responder shift turnover supported by WebEOC improvements and training of responders. The staff is also actively working to clarify expectations provided to response team members and their management, including impacts on work schedules during periods of

activation, and processes to add and shed activities to ensure that priority response activities remain supported.

(5) Communications

The international nature of the Fukushima response provided several opportunities for improvement regarding communications with Federal, State, regional, and public stakeholders. The agency made procedural improvements to enhance communications between NRC headquarters and regional offices, through better use of the regional State liaison officers (RSLOs). RSLOs are a key part of the NRC's communications with State governments, including communication of event information to States neighboring the State in which the incident occurred. Indeed, before Fukushima, State communications generally focused solely on the State(s) in which the incident occurred. The staff incorporated additional methods, such as daily calls, to ensure information is presented to other interested stakeholders (e.g., RSLOs, State emergency managers, and program staff in Agreement States).

The staff is developing a new public information call center for incidents, designed to improve communications with stakeholders during significant incidents and enhance the NRC's capability to monitor publicly available information, including social media. This call center will be designed to process a high volume of calls to address questions or issues from various counterparts and stakeholders, such as State agencies and private citizens.

In an effort to build more robust communication with the whole community of responders, the Federal Radiological Preparedness Coordination Committee's response subcommittee is leading efforts to revise the Nuclear Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plans. The core planning team—consisting of the NRC, the Federal Emergency Management Agency, the U.S. Environmental Protection Agency, and the U.S. Department of Energy—will complete this revision using input and guidance from State, local, nongovernmental organizations, and other relevant parties, including the Conference of Radiation Control Program Directors.

(6) Technology

Much of the response technology functioned as intended during the Fukushima response; however, using these tools in real-world response versus exercises offered a unique perspective for feedback. The staff leveraged many new technology features in the buildout of the new NRC HOC, most notably improved accessibility to agency systems such as ADAMS and email, as well as many improvements to the WebEOC[®] response tool. Additionally, the Radiological Assessment System for Consequence Analysis (RASCAL) dose assessment code was updated to reflect enhancements identified during the Fukushima response. Specific information on updates to RASCAL can be found in the memorandum SECY-14-0027, "Review of Analysis Codes Used during the Fukushima Incident" (ADAMS Accession No ML14016A478), dated February 28, 2014.

CONCLUSION:

The staff remains confident in the agency's response readiness and the overall health of the response program. The NRC has completed significant improvements since 2011 that will

further enhance the agency's already strong response capability and effectiveness during both domestic and international nuclear incidents. In the spirit of continuous improvement, staff attention to the remaining AAR items is warranted and ongoing.

COORDINATION:

The Office of the General Counsel reviewed this paper and has no legal objection. The Office of the Chief Financial Officer reviewed this paper for resource implications and has no objection.

/RA/

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Enclosure:
Status of Fukushima Incident Response
Corrective Actions

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ADAMS ACCESSION No.: ML14329B297 * via email

OFFICE:	NSIR/DPR/C B	NSIR/DPR/CB	NSIR/DPR/C B	NSIR/DPR: D	NMSS	NRR/DIRS	NRR/JLD
NAME:	JKowalczyk	JGrant	JGrant	RLewis*	KJones*	SMorris*	MFranovich*
DATE:	01/06/15	01/12/15	01/14/15	01/29/15	02/09/15	02/10/15	02/11/15
OFFICE:	RI	RII	RIII	RIV	Tech Editor	OGC	NSIR: D
NAME:	JNoggle*	LWert*	BDickson*	JKozal*	CHsu*	HBenowitz*	JWiggins
Date	02/10/15	02/11/15	02/10/15	02/25/15	02/09/15	02/24/15	03/30/15

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