

POLICY ISSUE (Information)

November 3, 2014

SECY-14-0123

FOR: The Commissioners

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

SUBJECT: ANNUAL UPDATE ON THE STATUS OF EMERGENCY
PREPAREDNESS AND INCIDENT RESPONSE PROGRAM ACTIVITIES

PURPOSE:

To update the Commission on the U.S. Nuclear Regulatory Commission's (NRC's) emergency preparedness (EP) and incident response (IR) program activities for fiscal year (FY) 2014, and provide an assessment of the NRC's EP program. This paper does not address any new commitments or resource implications.

SUMMARY:

EP and IR programs continue to align with the agency's strategic security and safety goals. The NRC continues to strengthen its coordination and collaboration with the Federal Emergency Management Agency (FEMA) on off-site EP and IR activities. The outcomes of the activities carried out by the staff are clearly aligned to the organizational goals and objectives identified in the FY 2014 - 2018 NRC strategic plan.

BACKGROUND:

In the staff requirements memorandum (SRM) responding to SECY-05-0010, "Recommended Enhancements of Emergency Preparedness and Response at Nuclear Power Plants in the Post-9/11 Environment," the Commission directed the staff to provide a semiannual report on important EP and IR activities (Agencywide Documents Access and Management System (ADAMS) Accession No. ML051250012). In SECY-07-0182, "Semi-Annual Update on the Status of Emergency Preparedness Activities," dated October 19, 2007, the staff requested a

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change in the frequency of this report from semiannual to annual (ADAMS Accession No. ML072500323). In the SRM to SECY-07-0182, dated December 21, 2007 (ADAMS Accession No. ML073550647), the Commission approved the staff's request and provided the following direction:

The annual paper should become more of a self-assessment and communication tool, perhaps summarizing accomplishments and providing a status on improvement initiatives within our EP and IR programs. Such an assessment should be coordinated with and not overlap the Reactor Oversight Process self-assessment of the EP cornerstone, and should be designed to aid the staff in effecting continuous and coordinated improvements to the overall EP and IR program, as well as to inform the Commission and the public of progress.

DISCUSSION:

The NRC's EP and IR programs provide reasonable assurance that adequate measures can and will be taken to mitigate plant events and reduce possible radiation doses to members of the public. The staff works to ensure the EP and IR programs are integrated with agency safety and security programs, and that the NRC continuously improves its EP and IR activities as experience is gained and national EP and IR programs evolve. This paper provides an update on the major FY 2014 activities of the NRC's EP and IR programs. The layout of the paper is consistent with the format of the agency's FY 2014 budget structure, by business line and product line, to reflect the NRC's EP and IR program accomplishments among the various business lines.

Operating Reactors Licensing

Hostile Action-Based Exercises:

Enhancements to the NRC's EP regulations, issued in a final rule (EP rule) effective December 23, 2011 (76 FR 72560), require nuclear power reactor licensees to demonstrate response to a hostile action-based (HAB) event, as part of a biennial exercise, by December 31, 2015. Thirty-two HAB exercises are scheduled to be completed in calendar year 2014; and by October 31, 2014, 27 HAB exercises were completed. Licensees have demonstrated their ability to respond to an HAB event by implementing their emergency plans in response to the event and coordinating on-site security, operations, and emergency response personnel with off-site response organizations.

Evacuation Time Estimate Updates:

An evacuation time estimate (ETE) is primarily used to inform protective action decision-making and may also be used to assist in development of traffic management plans to support evacuation. The recent EP rule established requirements for the updating of ETEs, and required licensees to submit an updated ETE at least 180 days before using the analysis to form protective action recommendations, as well as providing the analysis to State and local

governmental authorities for a development of offsite protective action strategies. The staff completed its review of initial licensee ETE updates to ensure consistency with the guidance in NUREG/CR 7002, "Criteria for Development of Evacuation Time Estimate Studies" (ADAMS Accession No. ML11329A053). These reviews were performed as inspection activities to ensure consistency with the guidance provided in NUREG/CR 7002 and did not constitute a licensing action. The exception to this was the Turkey Point ETE update, which was submitted as a supplement to the combined operating license application process and reviewed for approval as a formal licensing action. In general, these reviews verified that the guidance provided in NUREG/CR 7002 was being used in the development of ETE analyses. However, issues were identified in several ETE updates regarding the content and consistency of several ETE updates against the guidance in Table B-1, "ETE Review Criteria Checklist," to NUREG/CR-7002.

Revision of NUREG-0654/FEMA-REP-1:

The NRC and FEMA working group continued revising NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (ADAMS Accession No. ML040420012). The joint NRC and FEMA working group completed initial drafts of the introductory information in Section I and emergency plan evaluation criteria in Section II. The NRC and FEMA staff jointly conducted a series of public meetings on October 29-31, 2013, and June 25, 2014, to solicit feedback from members of the public on the initial drafts. The staff expects that a draft revision will be issued for public comment in the first quarter of FY 2015.

The staff is also developing a companion document to NUREG-0654/FEMA-REP-1 that will provide amplifying guidance for the emergency plan evaluation criteria, as well as consolidating information found in other NRC EP-related guidance documents and generic communications issued over the past 30 years. The staff also intends to issue a draft of the companion document to NUREG-0654/FEMA-REP-1 for public comment.

Performance-Based EP:

The staff completed its efforts on the feasibility of a regulatory regimen that is risk-informed and performance-based for EP. The staff effort was communicated to the Commission in SECY-14-0038, "Performance-Based Framework for Nuclear Power Plant Emergency Preparedness Oversight." The staff determined that it is possible to construct a performance-based oversight regimen that could potentially improve both oversight and licensee preparedness flexibility. However, the staff recommended not to proceed with rulemaking as current EP regulations provide for reasonable assurance that adequate protection can and will be provided. On September 16, 2014, the Commission issued an SRM in response to SECY-14-0038 that approved the staff's recommendation.

Reporting Major Loss of EP Capabilities per Title 10 of the *Code of Federal Regulations* (10 CFR) 50.72:

The staff worked with the Office of Nuclear Reactor Regulation to review and endorse Nuclear Energy Institute (NEI) 13-01, "Reportable Action Levels for Loss of Emergency Preparedness Capabilities" (ADAMS Accession No. ML131560390). NEI 13-01 serves as an industry initiative to supplement the guidance in Section 3.2.13, "Loss of Emergency Preparedness Capabilities," of NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73." In pursuing this initiative, the industry sought to reduce the amount of engineering judgment involved in making reporting decisions involving major losses of EP capabilities. The revised guidance reduces the number of unnecessary event reports (e.g., radiation monitors taken out of service for planned maintenance) while ensuring that meaningful event reports (unplanned outage of the Technical Support Center) continue to be made, thereby reducing unnecessary burden for the industry and the staff.

Decommissioning Activities:

License exemption requests to the EP requirements in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," were received for Kewaunee Power Station, Crystal River Nuclear Generating Plant (Unit 3), and San Onofre Nuclear Generating Station (Units 2 and 3), which have certified permanent cessation of operation and removal of spent fuel from the reactor vessel. A fourth license exemption request was received for Vermont Yankee Nuclear Power Station, which has indicated its intent to permanently cease operation in December 2014.

SECY-14-0066, "Request by Dominion Energy Kewaunee, Inc. for Exemptions from Certain Emergency Planning Requirements" (ADAMS Accession No. ML14072A257), was submitted providing the staff's evaluation of the requested EP exemption for Kewaunee Power Station. On August 7, 2014, the Commission issued an SRM in response to SECY-14-0066 (ADAMS Accession No. ML14219A366), approving the staff's recommendation to grant the licensee's requested exemptions. The staff is currently evaluating the license amendment requests to the permanently decommissioned emergency plans and emergency action levels for the Kewaunee Power Station implementing these exemptions. The staff is also continuing its evaluation of exemption requests regarding 10 CFR Part 50 for Crystal River Nuclear Generating Plant (Unit 3), San Onofre Nuclear Generating Station (Units 2 and 3), and Vermont Yankee Nuclear Power Station. The staff is projected to provide respective SECY papers to the Commission in the first quarter of FY 2015.

The NRC is developing an interim staff guidance, entitled "Emergency Planning Exemption Requests for Decommissioning Nuclear Power Plants" (ADAMS Accession No. ML13304B442), to assist staff in the evaluation of future EP exemption requests for decommissioning reactors and the review of permanently defueled emergency plans implementing exemptions.

Two new inspection procedures were created under the Decommissioning Power Reactor Inspection Program 2561 to evaluate: (1) the licensee's EP program state of operational

readiness; and (2) the adequacy of the licensee's conduct of the biennial exercise and capability to assess performance via a formal critique process in order to identify and correct weaknesses.

Fukushima Near-Term Task Force (NTTF) Support:

The staff completed its assessment of licensee responses to the NRC's March 12, 2012, 10 CFR 50.54(f) letters regarding communications and Phase I staffing for a station blackout (SBO) event affecting multiple units. The staff is currently reviewing licensees' Phase II staffing assessments on SBO coping strategies developed in response to Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events," dated March 12, 2012. Also, the staff has completed its review of licensee responses regarding their planned multi-unit, multi-source dose assessment capability and determined that all licensees intend to have automated multi-unit and/or multi-source dose assessment capabilities by December 31, 2014.

On January 28, 2014, the NRC's Fukushima Steering Committee endorsed consolidating, into a single rulemaking activity, the Station Blackout Mitigation Strategies rulemaking (NTTF Recommendations 4 and 7) with the Onsite Emergency Response Capabilities rulemaking (NTTF Recommendation 8), as well as the portions of NTTF Recommendations 9, 10, and 11 that are already being addressed as part of Order EA-12-049 (Mitigation Strategies) implementation (NTTF Recommendation 4.2), and items currently being implemented by industry. The staff provided a proposal to consolidate those rulemaking activities to the Commission in "Fifth 6-Month Status Update on Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Subsequent Tsunami," dated April 17, 2014 (ADAMS Accession No. ML14064A520). The Commission subsequently approved the rulemaking consolidation concept through an SRM dated July 9, 2014 (ADAMS Accession No. ML14190A347).

Those NTTF EP issues not approved by the Commission through the consolidated rulemaking would be addressed in accordance with the Tier 2 program plans provided to the Commission in COMSECY-13-0010, "Schedule and Plans for Tier 2 Order on Emergency Preparedness for Japan Lessons-Learned" (ADAMS Accession No. ML12339A262) and Tier 3 program plans in SECY-12-0095, "Tier 3 Program Plans and 6-Month Status Update in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Subsequent Tsunami" (ADAMS Accession No. ML12208A419).

Outreach Activities:

The staff's public outreach and communications activities continue to effectively engage stakeholders using both conventional and social media to ensure an open and transparent program that encourages public involvement. This has been accomplished through the publication of a quarterly EP newsletter, submittal of agency blog posts, and use of the NRC's public Web site to communicate with stakeholders and update them on significant EP-related activities and initiatives. The staff also provided updates on NRC activities and initiatives to licensees, and State and local emergency management stakeholders at various national and regional forums and conferences. Additionally, the staff, in conjunction with FEMA, conducted the second in a series of stakeholder engagement meetings to discuss proposed changes to NUREG-0654/FEMA-REP-1.

Operating Reactors/Event Response**Southern Exposure 2015 (SE-15):**

The NRC is supporting the development of, and will be participating in, the SE-15 Exercise, co-sponsored by the State of South Carolina (host), Duke Energy's H. B. Robinson Nuclear Plant, the NRC, FEMA, and the Department of Energy/National Nuclear Security Administration. The exercise is being designed to examine the core capabilities and the whole community's (e.g., government, volunteer, and private sectors) ability to respond to, and recover from, a nuclear power plant emergency which results in widespread contamination beyond the site boundary. SE-15 will be conducted during the week of July 20, 2015, and will be integrated into the H. B. Robinson Plant's biennial graded radiological EP exercise.

Nuclear Radiological Incident Annex Revision:

FEMA, with the NRC, the Federal Bureau of Investigation, the Department of Energy, and other agencies are coordinating efforts to revise the Nuclear Radiological Incident Annex as a robust operational incident annex to the Federal Interagency Operations Plans for the Response and Recovery mission areas. The planning is being performed with the Federal Radiological Preparedness Coordination Committee Response sub-committee, and the Emergency and Recovery Support Function Leadership Group. This annex to the Response and Recovery Federal Interagency Operating Plans under the National Response Framework (NRF) will address nuclear and radiological incidents, including those involving nuclear power plants, caused by natural events, accidents, and intentional acts. In addition, the revision will update the document to reflect new response concepts from the revised NRF, as well as to incorporate lessons from Fukushima and other events. The NRC participates on the core planning team that is working on the revision. The majority of the revision will be completed in a collaborative manner not just with Federal stakeholders, but with input and guidance from State, local, and non-governmental organizations, and other relevant parties. This effort supports building a more robust national communication with the 'whole community' of responders. In addition, the NRC's participation helps to maintain cooperative intergovernmental relationships to ensure the NRC roles and responsibilities are considered and reflected in national resiliency capabilities.

Japan Incident Response Corrective Actions:

The staff successfully implemented a path forward for the lessons learned as identified in the Japan Incident Response After Action Report, dated December 29, 2011 (ADAMS Accession No. ML112580203). The staff compiled feedback from the response and has made significant progress toward resolving critical operational response issues. As part of the Fukushima incident response corrective action process, staff is also making significant upgrades to the manual chapters and procedures of the IR program.

In the coming months, the staff intends to engage the Commission specifically on issues related to potentially restructuring the Incident Response Executive Team and on the voluntary nature of staffing the NRC's IR program.

Multiple Business Lines/Event Response

The staff continues to enhance the agency's fuel cycle event response capability. Specifically, in FY 2014, training programs have been revised and enhanced, and a new software tool has been added to predict the dispersion of chemical releases.

New Reactors/Licensing**New Reactor Licensing Activities:**

The staff continues to support the Office of New Reactors for EP reviews of combined license applications, early site permit applications, and new reactor designs. In addition, the staff served as members of the construction reactor oversight process transition working group; the Regulatory Guide 1.206 update working group; the standardized inspections, test, analysis, acceptance criteria working group; and the inspection, test, analyses, and acceptance criteria hearing procedures working group. In keeping with the staff's plans as outlined in SECY-11-0152, "Development of an Emergency Planning and Preparedness Framework for Small Modular Reactors," dated October 28, 2011 (ADAMS Accession No. ML112570439), the staff participated in a public meeting with NEI to discuss an industry paper addressing source term and EP for small modular reactors.

Multiple Business Lines/Licensing**Licensing Activities:**

The staff continues to support the Office of Nuclear Reactor Regulation and the Office of Nuclear Material Safety and Safeguards in EP-related licensing requests. Staff has completed 18 technical evaluations for EP-related licensing requests with a significant number of evaluations in-progress. Examples of the 18 technical evaluations completed include: site-specific changes to two nuclear power plant emergency plans; license renewal evaluations for five research and test reactors; and emergency plan changes for five fuel cycle facilities.

Assessment of the NRC's Emergency Preparedness and Incident Response Programs

The staff conducted an assessment (enclosed) to evaluate the NRC's EP and IR programs against four performance measures. These performance measures are tied to the agency's strategic goal of safety and the organizational excellence strategies of openness and effectiveness.

The first performance measure is managing reviews of EP licensing activities to ensure safety. Successful demonstration of this performance measure can be seen in the development, maintenance, and implementation of the licensing and regulatory programs in an integrated manner and meeting execution targets of 90-percent timeliness and deliverables being of high quality. The second performance measure is implementing a prioritized path forward for lessons-learned from the Fukushima Dai-ichi accident. Successful demonstration of this performance measure can be seen in the staff's 90-percent implementation of NTTF recommendations, and 90-percent participation in Federal working groups for the

Federal-wide implementation of lessons learned. The third performance measure is managing rulemakings and supporting regulatory guidance development. Successful demonstration of this performance measure can be seen in the development, maintenance, and implementation of the regulatory guidance documents and the EP items related to NTTF rulemaking activities. The fourth performance measure is the implementation of an effective Continuity of Operations Program (COOP) consistent with Federal Continuity Directives. Successful demonstration of this performance measure can be seen in the development, maintenance, and implementation of a COOP program consistent with Federal Continuity Directives and meeting the execution target of 100-percent readiness to respond to incidents and emergencies involving the NRC-licensed facilities and radioactive materials, and other events of domestic and international interest. The results of the assessment confirmed that the EP and IR programs employ effective strategies to meet these performance measures within acceptable execution targets.

CONCLUSION:

The EP and IR programs continue to provide reasonable assurance that adequate protective measures can and will be implemented in the event of a radiological emergency. The staff's review of licensing activities and inspection of licensee EP programs are effective. In addition, the staff continues to expand outreach activities and works proactively and collaboratively in the development of EP and IR guidance documents. The EP and IR programs have been improved by incorporating lessons learned through real events, including natural disasters.

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:

NRC Assessment of Emergency Preparedness
and Incident Response Programs

NRC Assessment of Emergency Preparedness and Incident Response Programs

The U.S. Nuclear Regulatory Commission (NRC) emergency preparedness (EP) and incident response (IR) programs were assessed by the staff against four performance measures: (1) managing reviews of licensing activities to ensure safety; (2) implementing a prioritized path forward for lessons-learned from the Fukushima Dai-ichi accident; (3) managing rulemakings and supporting regulatory guidance development; and (4) implementing an effective Continuity of Operations (COOP) Program consistent with Federal Continuity Directives. These performance measures are tied to the agency's strategic goal of safety and the organizational excellence strategies of openness and effectiveness. The results of the assessment indicated that the EP and IR programs employ effective strategies to meet these performance measures within acceptable execution targets.

Performance Measure 1: Managing reviews of EP licensing activities to ensure safety.

The staff demonstrated an ability to develop, maintain, and implement licensing and regulatory programs in an integrated manner and met the execution targets of 90-percent timeliness and high quality. The EP program is assessed as effective in managing reviews of EP licensing activities to confirm that they provide an adequate margin of safety consistent with NRC rules and regulations. Significant activities included:

Operating Reactor and Fuel Facility Licensing Activities:

The staff completed 18 technical evaluations for work requests from the Offices of Nuclear Reactor Regulation and Nuclear Material Safety and Safeguards.

These completed technical evaluations included the following:

- emergency action level (EAL) change to existing licensee scheme for Vogtle Electric Generating Plant, Unit 1
- exemption requests for Oyster Creek Nuclear Generating Station and the Byron Station for deferral of the biennial EP exercise
- exemption request for Rancho Seco regarding the revised EP rule for currently decommissioned facilities licensed under Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR)
- license amendment request (LAR) for a revision to the La Crosse Emergency Response Plan (decommissioning facility)
- site-specific changes to two nuclear power plant emergency plans
- license renewal evaluations for five research and test reactors
- emergency plan changes for five fuel cycle facilities

Enclosure

In addition, two submittals for changes to licensees' emergency response organization (ERO) augmentation times and staffing were completed. The staff is working to provide additional clarification regarding the use of Nuclear Energy Institute (NEI) 10-05, "Assessment of On-Shift Emergency Response Staffing and Capabilities," in the justification of proposed ERO augmentation changes. These reviews were completed on time based on schedules coordinated with each respective office.

New Reactor Licensing Activities:

The staff reviewed EP aspects for the North Anna combined operating license application (COLA) and developed the safety evaluation report. The staff also completed its review of the early site permit (ESP) application for Public Service Enterprise Group; the review of the Levy combined license application revision; and the license amendment requests for the Vogtle and Summer combined licenses to address the revised EP rule implementation. These reviews were completed on, or ahead of, schedule. The staff also provided support for the Advisory Committee on Reactor Safeguards requests and meetings associated with the South Texas Project and Fermi COLAs, and the Public Service Enterprise Group's ESP. In addition, the staff reviewed and requested additional information for the SHINE construction permit application. These reviews were completed on or ahead of schedule and required minimal technical editing.

Decommissioning Activities:

Four license exemption requests regarding the EP requirements of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," were received for NRC consideration: Kewaunee Power Station, Crystal River Nuclear Generating Plant (Unit 3), San Onofre Nuclear Generating Station (Units 2 and 3), and Vermont Yankee Nuclear Power Station. These exemptions were developed by licensees, using the most recent EP exemption requests from the late 1990s as a template, because of the lack of EP-specific NRC regulations and guidance governing decommissioning.

SECY-14-0066, "Request for Dominion Energy Kewaunee, Inc. for Exemptions from Certain Emergency Planning Requirements" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14072A257), was submitted providing the staff's evaluation of the requested EP exemption for Kewaunee Power Station, which was approved by the Commission in a staff requirements memorandum (SRM), dated August 7, 2014 (ADAMS Accession No. ML14219A366). The staff is currently evaluating the LARs concerning the decommissioned emergency plans and EALs for the Kewaunee Power Station implementing these exemptions, if granted. The staff is also continuing its evaluation of exemption requests regarding 10 CFR Part 50 for Crystal River Nuclear Generating Plant (Unit 3), San Onofre Nuclear Generating Station (Units 2 and 3), and Vermont Yankee Nuclear Power Station and is projected to provide respective SECY papers to the Commission in the first quarter of fiscal year (FY) 2015.

In addition to EP-related license exemption requests, the staff is currently evaluating an LAR for the Vermont Yankee Nuclear Power Station that would provide for the reduction of on-shift and ERO augmentation staffing commensurate with the risk associated with a permanently shut down reactor with spent fuel removed from the reactor vessel. If granted, this LAR would not

eliminate any existing EP requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities," including the need to maintain formal offsite radiological EP plans.

The NRC created two new inspection procedures under the Decommissioning Power Reactor Inspection Program 2561 to evaluate: (1) the licensee's EP program state of operational readiness, and (2) the adequacy of the licensee's conduct of the biennial exercise and capability to assess performance via a formal critique process in order to identify and correct weaknesses.

Resource demands in support of decommissioning licensing activities and projected operating reactor licensing submittals will require close coordination and prioritization of work activities with respective offices.

The staff continues to use the Federal Emergency Management Agency (FEMA)/NRC EP Steering Committee to: facilitate effective interagency dialogue; to coordinate joint activities related to EP licensing and EP rule implementation; to evaluate performance-based offsite EP regulations; to discuss comments on EP-related NRC studies; and to manage proposed changes to respective agency and joint guidance documents.

Hostile Action-Based Exercises:

Twenty-seven of 32 hostile action-based (HAB) exercises scheduled for calendar year 2014 have been completed. Each exercise is evaluated by NRC EP inspectors and FEMA evaluators in accordance with new inspection procedures and guidance documents created in support of the 2011 EP rule. The NRC Headquarters Operations Center has provided simulation cell exercise support during numerous licensee HAB exercises, in addition to full NRC Incident Response Center participation in several exercises. Observations by regional EP inspectors are being collected from the HAB exercises and lessons learned are being developed to inform the HAB EP inspection process and the NRC incident response to postulated HAB events. The staff continues to coordinate HAB EP evaluation activities with FEMA to ensure that onsite and offsite EPs support the conduct of HAB exercises.

Performance Measure 2: Implementing a prioritized path forward for lessons-learned from the Fukushima Dai-ichi accident.

The staff collaboratively worked with other NRC offices, domestic and international stakeholders, industry groups, and members of the public to develop and implement lessons learned from the Fukushima Dai-ichi accident. The staff met the execution targets of 90-percent implementation of Near-Term Task Force (NTTF) recommendations, and 90-percent participation in Federal working groups for the Federal-wide implementation of lessons learned. The EP and IR programs are assessed as effective in prioritizing and implementing the lessons learned from the Fukushima Dai-ichi accident. Significant activities included:

Fukushima NTTF Support:

In partnership with the Office of Nuclear Reactor Regulation, Office of New Reactors, Office of Nuclear Regulatory Research, and the Office of the General Counsel, the staff provided a proposal to consolidate rulemaking activities for NTTF Station Blackout Mitigation Strategies

(Recommendations 4 and 7), On-site Emergency Response Capabilities (Recommendation 8), and certain Tier 1, 2, and 3 NTF EP recommendations (in Recommendations 9, 10, and 11) to the Commission in “Fifth 6-Month Status Update on Response to Lessons Learned from Japan’s March 11, 2011, Great Tohoku Earthquake and Subsequent Tsunami,” dated April 17, 2014 (ADAMS Accession No. ML14064A520). The Commission subsequently approved the rulemaking consolidation concept through an associated SRM, dated July 9, 2014.

In support of implementation of Tier 2 NTF EP recommendations and the proposed consolidated NTF rulemaking effort, the staff reviewed and provided input on the guidance documents, NEI 13-06, “Enhancements to Emergency Response Capabilities for Beyond Design Basis Accidents and Events,” and NEI 14-01, “Emergency Response Procedures and Guidelines for Beyond Design Basis Events and Severe Accidents.” Both documents are currently under staff consideration for potential endorsement.

On November 19, 2013, March 4, 2014, and August 26, 2014, the staff conducted public meetings with interested members of the public and industry representatives to discuss and review, in part, draft guidance documents NEI 13-06 and NEI 14-01, and address subsequent implementation of the Tier 2 NTF EP recommendations.

Japan Incident Response Corrective Actions:

The staff compiled a full status update of IR corrective actions in a Commissioners’ Assistant Note dated July 11, 2014 (ADAMS Accession No. ML14184B498). Many of the issues were resolved through improvements incorporated into the new Three White Flint North Headquarters Operations Center. The staff made significant progress toward resolving critical operational issues. Complex issues that involve close coordination with the Commission, other NRC offices, or external entities, and items that require ongoing management or implementation remain open. Some of the open items include implementation of the recently approved Chemical, Biological, Radiological, and Nuclear international response protocol, proposed Incident Response Executive Team restructure to reflect real-world roles and responsibilities of senior agency leadership, and completion of an incident response program-wide guidance and procedure update. These response improvements have contributed to the safety and security of NRC-licensed facilities.

Nuclear Radiological Incident Annex Revision:

FEMA, along with the NRC, the Federal Bureau of Investigation, the U.S. Department of Energy, and other agencies, is coordinating efforts to revise the Nuclear Radiological Incident Annex as a robust operational incident annex to the Federal Interagency Operations Plans for the Response and Recovery mission areas. The planning is being performed with the Federal Radiological Preparedness Coordination Committee Response sub-committee, and the Emergency and the Recovery Support Function Leadership Group. This annex to the Response and Recovery Federal Interagency Operating Plans under the National Response Framework (NRF) will address nuclear and radiological incidents, including those involving nuclear power plants, caused by natural events, accidents, and intentional acts. In addition, the revision will update the document to reflect new response concepts from the revised NRF, as well as to incorporate lessons from Fukushima and other events. The NRC participates on the core planning team which is working on the revision. The majority of the revision will be

completed in a collaborative manner not just with Federal stakeholders, but with input and guidance from State, local, and nongovernmental organizations, and other relevant parties. This effort supports building a more robust national communication with the 'whole community' of responders. In addition, the NRC participation helps to maintain cooperative intergovernmental relationships to ensure the NRC roles and responsibilities are considered and reflected in national resiliency capabilities.

Performance Measure 3: Managing rulemakings and supporting regulatory guidance development.

The staff demonstrated an ability to develop, maintain, and implement regulatory guidance documents and the EP items related to the NTF rulemaking activities. The staff met the execution targets of 90-percent of milestones to provide technical basis or regulatory guidance documents to NRC offices and 90-percent implementation of NTF recommendations. The EP program is assessed as effective in providing timely technical basis analyses/regulatory guidance documents to NRC offices, as well as managing the development of key aspects of NTF rulemaking activities/recommendations. Significant activities included:

Revision to NUREG-0654/FEMA-REP-1:

The collaborative effort between the NRC and FEMA continues throughout the revision process of NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants." The joint NRC and FEMA working group completed initial drafts of the introductory information in Section I and emergency plan evaluation criteria in Section II. The NRC and FEMA staff jointly conducted a series of public meetings on October 29-31, 2013, and June 25, 2014, to solicit feedback from stakeholders and members of the public on the initial drafts. The staff expects that the draft revision will be issued for a 90-day public comment period in the first quarter of FY 2015 following completion of the NRC and FEMA internal review and approval processes. The staff is also developing a companion document to NUREG-0654/FEMA-REP-1 that will provide amplifying guidance for the emergency plan evaluation criteria, as well as consolidating information found in the other NRC EP-related guidance documents and generic communications issued over the past 30 years. The staff also intends to issue a draft of the companion document to NUREG-0654/FEMA-REP-1 for public comment.

The initiative to restructure and streamline the document to focus the evaluation criteria on overall response capabilities relevant to both onsite and offsite EP programs continues to ensure a stable and predictable EP regulatory program for licensing, oversight, and regulatory infrastructure.

Evacuation Time Estimate Updates:

The staff completed its review of initial licensee evacuation time estimate (ETE) updates to ensure consistency with the guidance in NUREG/CR 7002, "Criteria for Development of Evacuation Time Estimate Studies" (ADAMS Accession No. ML11329A053). These reviews were performed as inspection activities to ensure consistency with the guidance provided in NUREG/CR 7002 and did not constitute a licensing action. The exception to this was the Turkey Point ETE update, which was submitted as a supplement to the COLA process and

reviewed for approval as a formal licensing action. In general, these reviews verified that the guidance provided in NUREG/CR 7002 was being used in the development of ETE analyses. However, issues were identified in several ETE updates regarding the content and consistency of several ETE updates against the guidance in Table B-1, "ETE Review Criteria Checklist," to NUREG/CR-7002. Issues identified in these ETE updates were addressed as part of the Reactor Oversight Process, and revisions to ETE updates addressing these issues were subsequently submitted for staff review. Documentation of the staff's reviews was provided to the respective regions for inclusion in the Resident Inspector's quarterly site inspection report. Subsequent updates to licensee ETEs will be reviewed by the regions as a periodic inspection activity under Inspection Procedure 71114.05, "Maintenance of Emergency Preparedness."

Reporting Major Loss of EP Capabilities per 10 CFR 50.72:

The staff endorsed NEI 13-01, "Reportable Action Levels for Loss of EP Capabilities". The industry initiative on NEI 13-01 sought to reduce the amount of engineering judgment involved in making reporting decisions involving major losses of EP capabilities. NEI 13-01 served as an industry initiative to supplement the guidance in Section 3.2.13, "Loss of Emergency Preparedness Capabilities," of NUREG-1022, "Event Report Guidelines: 10 CFR 50.72 and 50.73." The industry document presents the guidance in the form of reportability action levels, similar in format to the industry guidance on EALs. In conjunction with its review, the staff conducted a series of public meetings to solicit feedback from stakeholders and members of the public on the document.

Outreach Activities:

EP and IR public outreach and communications activities continue to support the organizational excellence strategy of openness. The staff demonstrated an ability to provide accurate and timely information, to provide for meaningful stakeholder involvement, and to enhance awareness and clearly communicate the NRC EP and IR programs' roles, processes, and activities. In all cases, external interactions have been promptly communicated within the NRC and to regional offices. Based on this, the EP and IR programs are assessed as effective at providing accurate and timely information to the Commission, NRC staff, the public, licensees, and other stakeholders about the NRC preparedness programs. Significant activities included:

- Stakeholder input on the scope and process for revising NUREG-0654/FEMA-REP-1 was actively solicited and collected through Docket No. FEMA-2012-0026 on <http://www.regulations.gov>. This input was used to inform the joint NRC and FEMA decision-making process for selecting the path forward for revising the document and providing multiple stakeholder involvement opportunities during the revision process.
- The staff coordinated two EP-related sessions at the 2014 Regulatory Information Conference. One session focused on facilitating discussion on the possibility of creating a risk-informed and performance-based emergency protection regulatory regimen, based on the results of a recent NRC-sponsored study. The second session discussed considerations for an enhanced safety and security defense-in-depth strategy during HAB events and focused on the purposes and potential enhancements to force-on-force exercise, HAB exercises, and law enforcement integrated response initiatives.

- Public meetings were held to discuss (and to elicit fair, timely, and meaningful stakeholder involvement) EP-related decommissioning activities, including a draft interim staff guidance document (NSIR/DPR-ISG-02) and potential changes to decommissioning facility's emergency plans under the license amendment and exemption processes. Public meetings were also held as part of the Emergency Preparedness Frequently Asked Question process to solicit discussion on proposed clarifications to existing NRC guidance in support of the recent EP rule implementation and EP-related decommissioning activities. These public meetings helped to communicate the NRC's role, processes, activities, and decisions to the public in plain, clear, and understandable language.
- On April 8, 2014, the NRC held a public meeting with NEI to exchange ideas and receive public comments on an industry white paper from NEI (dated December 23, 2013), which set forth an approach for small modular reactors (SMRs) based on the concept that EP requirements (specifically emergency planning zones) could be scaled to be commensurate with the accident source term, fission product release, and associated dose characteristics for SMR designs.
- The staff's public outreach and communications activities continue to successfully provide accurate and timely information to stakeholders using both conventional and social media to ensure an open and transparent program that encourages public involvement. This was accomplished through the publication of a quarterly Emergency Preparedness and Response Newsletter, submittal of agency blog posts, and use of the NRC's public Web site to communicate with stakeholders and update them on significant EP-related activities and initiatives.
- The staff coordinated the development of communication and messaging plans to inform offices, regions, FEMA, and various external stakeholders of the publication of EP and IR related documents and activities.
- The staff provided updates on the NRC EP and IR activities and initiatives at the annual NEI EP Forum and the National Radiological Emergency Preparedness Conference.
- The staff supported FEMA on radiological EP and IR activities and initiatives at the National Emergency Management Association annual and mid-year conferences. The staff also attended the International Association of Emergency Managers meeting to engage a broad range of Federal, State, local, and Tribal emergency management officials.
- The staff provided training and insights to licensees on the NRC regulatory processes at the annual NEI EP Managers Training Session and the Institute of Nuclear Power Operations New EP Managers Seminar. Additionally, FEMA staff attended the Emergency Preparedness Technology Course (H-203) provided by the staff.

Performance Measure 4: Implementation of an effective COOP program consistent with Federal Continuity Directives.

The staff demonstrated an ability to develop, maintain, and implement a COOP program consistent with Federal Continuity Directives and met the execution target of 100 percent to ensure the NRC's readiness to respond to incidents and emergencies involving the NRC licensed facilities and radioactive materials, and other events of domestic and international interest. The IR program is assessed as effective in ensuring resilience of the NRC's mission-essential functions through the implementation of an effective COOP program. Significant activities included:

Headquarters Operations Center Weather-Related Flooding Event:

In January 2014, the Three White Flint Headquarters Operations Center experienced a weather-related flooding event that forced evacuation of the area for approximately 6 weeks. This flooding event tested NRC's COOP program and demonstrated effective implementation of the program. IR, in collaboration with staff in the Office of Administration and the Three White Flint building owner, ensured the NRC's readiness to respond to incidents and emergencies involving the NRC licensed facilities and radioactive materials, and other events of domestic and international interest, by successfully transferring operations to the NRC's backup facility for a short time. Other COOP functions were successfully transferred within the White Flint headquarters complex with minimal disruption. In March 2014, the Headquarters Operations Center became fully functional.

COOP Program:

Beginning in October 2013, the staff made significant changes to the NRC COOP plan and procedures (see SECY Information Paper 14-0026) to enhance the operational nature of the program. This included the creation of new procedures and checklists to ensure rapid and effective decision-making during a potential emergency at NRC headquarters facilities. In addition, the staff planned, coordinated, and conducted two COOP exercises including a January 7, 2014, tabletop exercise and the biennial, full-scale exercise Eagle Horizon 2014 on June 17, 2014.

The NRC successfully completed all activities related to Eagle Horizon 2014, which is the biennial, externally evaluated COOP exercise. Activities conducted as part of Eagle Horizon 2014 included a limited-scope COOP deployment exercise, and a thorough external evaluation, by FEMA, of the NRC's COOP plan, procedures, and exercise. During Eagle Horizon 2014, the NRC successfully demonstrated its capability to relocate, conduct its primary mission essential functions from a remote location, and created a scenario-specific plan to reconstitute the agency. The NRC received a high score and commendations from the FEMA external evaluator.