



POLICY ISSUE

(Information)

October 30, 2020

SECY-20-0101

FOR: The Commissioners

FROM: Brian E. Holian, Director
Office of Nuclear Security and Incident Response

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

PURPOSE:

The purpose of this paper is to provide the Commission the results of the annual assessment, with a focus on current and projected activities, of the U.S. Nuclear Regulatory Commission's (NRC) Emergency Preparedness (EP) and Incident Response (IR) programs for fiscal year (FY) 2020. This paper does not address any new commitments or resource implications.

SUMMARY:

This paper provides the staff's annual self-assessment of its EP and IR programs as well as a listing of significant accomplishments for FY 2020 and priorities for FY 2021. This paper also provides notification of the staff's intent that this paper serves as the final annual update to the Commission.

DISCUSSION:

The NRC staff assesses the agency's EP and IR programs on an annual basis to ensure alignment with the NRC's strategic security and safety goals. The staff provides this assessment, along with a summary of the significant accomplishments and improvement initiatives, to the Commission as required by Staff Requirements Memorandum (SRM) to SECY- 07-0182,¹ "Semi-Annual Update on the Status of Emergency Preparedness Activities,"

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¹ In SRM-SECY-05-0010 (Agencywide Document and Access Management System (ADAMS) Accession No. ML051250012), "Recommended Enhancements of Emergency Preparedness and Response at Nuclear Power Plants in Post 9/11 Environment," the Commission directed the staff to provide the Commission with semiannual status reports (later changed to annual reports per SRM-SECY-07-0182).

dated December 21, 2007. The NRC staff provided the last annual update in October 2019.² Enclosure 1 contains a summary of the significant FY 2020 accomplishments. Enclosure 2 contains a summary of the NRC's FY 2021 planned EP and IR activities.

Self-Assessment

The NRC's EP and IR programs and activities continue to align with the agency's strategic security and safety goals as identified in the FY 2018-2022 Strategic Plan. The staff assessed the NRC's FY 2020 EP and IR programs' performance against the FY 2020 priorities (as outlined in the FY 2019 annual paper) using the following five objectives:

1. Ensure the adequacy of the NRC's capabilities to respond to accidents and ensure radiation safety for safety or security events at licensed facilities by maintaining the readiness of the Headquarters Operations Center (HOC) and response organizations in the IR program.
2. Ensure safety and security considerations are appropriately integrated and reflected in EP licensing activities and communicate expectations to applicants.
3. Maintain and further risk-inform a stable and predictable EP regulatory infrastructure for licensing, oversight, and rulemaking.
4. Identify enhancements to the EP and IR programs.
5. Become a modern, risk-informed regulator through development of EP and IR Key Results (KR) that support the agency's transformational Objective and Key Results (OKR) framework.³

Objective 1 is associated with the event response product line. Successful demonstration of Objective 1 is reflected in the staff maintaining response team qualifications and HOC/Incident Response Center response availability; annual participation in EP/IR response exercises that involve a wide array of Federal, State and local authorities; and overall maintenance of cooperative intergovernmental relationships to ensure NRC roles and responsibilities are considered in national resilience programs. Activities that demonstrate successful implementation of Objective 1 include: maintaining 98 percent of designated responders fully qualified for the various IR teams by conducting six annual reactor licensee EP/IR table-top exercises, one full virtual response exercise, and one limited virtual response exercise to support the development and implementation of the Incident Response Reorganization Project (IRRP). Due to the novel coronavirus disease 2019 (COVID-19) Public Health Emergency (PHE), the staff had to cancel several full response exercises and the Federal Emergency Management Agency (FEMA) canceled the National Level and Eagle Horizon 2020 (Continuity of Operations [COOP]) exercises. In addition, based on lessons learned from the 2019 hurricane season, the NRC revised Incident Response Procedure 240, "Natural Phenomena," and coordinated with FEMA to improve communications between the National Response Coordination Center and the NRC during and after storms impacting nuclear power

² ADAMS Accession No. ML19218A277.

³ The staff established Objective 5 following the October 29, 2019, briefing to the Commission entitled, "Transformation at the NRC – Becoming a Modern, Risk-Informed Regulator," and the subsequent issuance of SRM-M191029, dated November 20, 2019.

plants. The NRC and FEMA validated the effectiveness of the procedure changes through conduct of a table-top exercise in preparation for the 2020 hurricane season.

Objectives 2 and 3 are associated with the licensing, oversight, and rulemaking product lines. Successful demonstration of both objectives is reflected in the staff's ability to complete technical evaluations of EP submittals for fuel cycle facilities, spent fuel storage installations, operating reactors, new reactors, and non-power reactors; and technical reviews of licensees' EP exemption requests and license amendment requests associated with existing emergency plans (EPlans) and emergency action level scheme changes for permanently defueled decommissioning sites. In FY2020, the Office of Nuclear Security and Incident Response completed one hundred percent of EP licensing actions ahead of schedule. The staff completed reviews for several EP-related decommissioning licensing actions, including obtaining the Commission's approval to grant an exemption to the Three Mile Island Nuclear Station licensee based on its permanent cessation of power operations and removal of fuel from the reactor vessel. The staff has continued to use a risk-informed approach in its timely review of the combined license for the Vogtle Electric Generating Plant Units 3 and 4, including successfully closing several inspections, tests, analyses, and acceptance criteria. Successful performance is also reflected in recent rulemaking activities such as the publication of the Emergency Preparedness for Small Modular Reactors (SMR) and Other New Technologies (ONT) proposed rule and draft regulatory guidance⁴ for public comment, and the forward progress of the Parts 50 and 52 Lessons-Learned rulemaking.

Objective 4 includes accomplishment of, or progress on, numerous improvement initiatives. On December 23, 2019, the staff issued Revision 2 of NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"⁵ the overarching guidance document for EP. This revision modernizes the guidance, incorporates 40 years of EP lessons learned since the NRC and FEMA published the original guidance in 1980, and achieves harmony between the NRC's radiological EP programs and FEMA's Comprehensive Emergency Management programs. Additionally, as part of the nuclear power industry's continuing efforts to seek greater program efficiencies, the staff continued to see an increase in proposed changes to licensee emergency response organizations on-shift staffing levels and augmentation response times, as well as the re-baselining of EPlans to allow greater flexibility for licensees to make changes without prior NRC approval.

The NRC is significantly enhancing its IR program through the IRRP, which better supports the information needs of the NRC and interagency, aligns the response program with national doctrines such as the National Incident Management System and the Incident Command System, implements lessons learned from the Incident Response Exercise Program, and provides transformative improvements that will reduce inefficiencies while concentrating on the IR program's core mission of event assessment and information sharing. Through the staff's procedures and training to leverage the use of information systems as part of the transition towards implementation of the IRRP, the agency was well-postured to maintain its response capabilities during the PHE restrictions. There has been even more alignment on response functions between headquarters and regional offices than in the past.

The NRC completed its annual update of the NRC COOP Plan in June 2020. These updates and related ongoing planning efforts ensure that NRC EPlans remain up to date, and that the

⁴ 85 FR 28436 (May 12, 2020); ADAMS Accession No. ML18134A086.

⁵ 84 FR 70399 (December 23, 2019); ADAMS Accession No. ML19347D139.

NRC continues to be prepared to respond to a wide variety of potential emergency situations. In support of the COOP program, the NRC streamlined its annual procedure update process, clarified roles and responsibilities, and changed the review level for several procedures, which will result in time and resource savings. In the response to the COVID-19 PHE, the staff used concepts explored during the development and annual review of the COOP and Pandemic Plans such as telework, staff safety, and reconstitution. Corrective actions taken as a result of COOP exercises, including increased information system technology support, also improved the NRC's readiness to respond to the PHE. The NRC's prior focus on COOP planning and exercises enhanced the agency's preparations to respond to emergency situations and positioned the agency for an appropriate response to the COVID-19 PHE.

Objective 5 is associated with EP and IR transformational activities that support the Office of Executive Director for Operations' initiatives and the agency's transformation KR's. Success is demonstrated by making progress on or completing transformational activities that align with the agency's KR 1⁶ and KR 2.⁷ Under KR 1, the NRC staff is developing a framework for risk-informing EP approaches for evolutionary and advanced reactors through development of a policy for SMRs and ONTs (see Objective 3). Under KR 2, the NRC staff has streamlined various business processes to enhance efficiency through revising NUREG-0654/FEMA-REP-1, reducing inefficiencies in the IR program, and aligning resources for COOP as reflected in the updated COOP plan (see Objective 4).

Additionally, under KR 2, the NRC staff better leveraged its interagency partners by building productive relationships in order to more effectively accomplish the NRC's EP and IR goals. The NRC staff has engaged with FEMA and other members of the Federal Radiological Preparedness Coordinating Committee on numerous occasions regarding their differing perspectives on several matters, primarily related to risk-informing emergency planning zone (EPZ) sizing for advanced reactor designs and in the reduction of offsite EP needs during decommissioning. The NRC staff presented its views on EPZ sizing to numerous interagency partners⁸ and will continue to work to reach common understanding with FEMA, consistent with the NRC's Principles of Good Regulation, when opportunities are present. The NRC staff also engaged FEMA and State, local, and county organizations with respect to licensee EP exercise exemptions in response to the COVID-19 PHE.

FY 2021 Focus Areas

Overall, the EP and IR programs have implemented, or are implementing, numerous improvements to already-strong processes and programs. The staff considers both programs to be effective; however, future improvements are possible and will be pursued. Consistent with SECY-20-0049, "Agencywide Transformation Performance Measures," dated May 29, 2020,⁹ the NRC has adopted a transformation framework, which is organized around four focus areas: 1) attracting and retaining staff, 2) innovation, 3) being "risk smart," and 4) using technology. The staff continues to transform its EP and IR programs to support the agency in achieving its

⁶ KR 1: Deliver impactful solutions that meet the near-term goals identified in the Transformation Roadmap and the fiscal year 2020 Office Transformation Plans by September 30, 2020.

⁷ KR 2: Free staff time to support better quality and more timely decision-making by each office improving at least three processes, either programmatic or corporate.

⁸ The NRC staff interfaced with the Federal Radiation Protection Coordinating Committee, Environmental Protection Agency, Department of Energy's National Nuclear Security Administration and Offices of Nuclear Energy and Naval Reactors, Department of State, and Department of the Army.

⁹ ADAMS Accession No. ML20149K586.

goal of becoming a modern and risk-informed regulator. As directed by the EDO and stated in Objective 5, the FY 2021 NSIR Transformation Plan includes focus areas and OKRs that will further enhance and transform the EP and IR programs.

Path Forward

It is the staff's intent that this paper be the final annual update to the Commission. Since the issuance of SRM-SECY-05-0010, the staff has provided 13 semi-annual or annual updates. Though there is some overlap of information in the content provided in the items listed, the staff believes that the EP and IR programs' significant accomplishments and activities are thoroughly communicated to the Commission and the public, as appropriate, through the various mechanisms identified below:

- Status Report on the Licensing Activities and Regulatory Duties of the U.S. Nuclear Regulatory Commission (meets Objectives 3-5)
The NRC transmits a quarterly status report to the Senate Committee on Environment and Public Works and Subcommittee on Clean Air and Nuclear Safety. This publicly available report provides the status of specific items of interest, including a summary of the item, the activities planned and accomplished within the reporting period, and projected activities for the next reporting period. Specifically, Section 2-1 of the report discusses Transformation Initiatives and Sections 2-11 discusses the risk-informed activities of the NRC, which can include EP and IR information.
- Quarterly Performance Review, Annual Performance Plan and Report, Congressional Budget Justification (meets Objectives 1-3)
NSIR participates in Quarterly Performance Review (QPR) meetings, which are held to review the status of major programmatic activities, discuss actions that can alleviate risks and challenges, and develop action items to achieve positive outcomes in relation to the annual performance plan and the NRC's annual Congressional Budget Justification. During the QPR meetings, the staff provides updates on the NRC's emergency response performance index, which evaluates the NRC's ability to maintain readiness to respond to incidents and emergencies involving NRC-licensing facilities and radioactive materials and other events of domestic and international interest.
- Annual Reactor Oversight Program (ROP) Self-Assessment (meets Objectives 2 and 3)
In SRM-SECY-00-0049, "Results of the Revised Reactor Oversight Process Pilot (Part 1)," dated March 28, 2000,¹⁰ the Commission approved the ROP self-assessment program. The publicly available ROP self-assessment addresses seven ROP cornerstones, one of which is EP.
- Annual Rulemaking Activities Report (meets Objective 3)
As required by SRM-SECY-16-0042, "Recommended Improvements for Rulemaking Tracking and Reporting," dated May 10, 2016,¹¹ the staff provides an Annual Rulemaking Report to the Commission, which provides appropriate links to the centralized activity tracking tool. The rulemaking pages on the NRC's public website provides information that is closer to "real time" regarding the status of various rulemaking activities.

¹⁰ ADAMS Accession No. ML003697804.

¹¹ ADAMS Accession No. ML16131A543.

- Commission Review of Certain Changes to Licensee EPlans (meets Objective 2)
In SRM-SECY-08-0224, "Delegation of Commission Authority to Staff to Approve or Deny Emergency Plan Changes that Represent a Decrease in Effectiveness," dated May 19, 2008,¹² the Commission directed the NRC staff request Commission approval for any reduction in effectiveness of a licensee's EPlan that requires an exemption from the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50.
- Public Website
In response to the Office of Inspector General (OIG) Audit (OIG-20-A-12), "Audit of NRC's Emergency Preparedness Program," dated June 23, 2020,¹³ the NRC staff reviewed the EP and IR public web pages and implemented design changes to improve clarity and enhance public understanding of the EP and IR programs. The NRC staff will continue to update the web pages on a recurring basis to communicate activities and changes to the EP and IR programs.
- Commission Communication
The staff will continue to communicate with the Commission via papers or other processes to keep the Commission informed of emergent issues, background issues developed by the staff, information received from external agencies involving policy, program, or technical issues, and other periodic reports that could be of interest.
- Press Releases, Federal Register Notices, and other Electronic Communications
The NRC staff continues to coordinate with the NRC's Office of Public Affairs to issue timely communications related to significant EP/IR activities to members of the public through press releases¹⁴ or social media. The NRC staff also publishes notices in the Federal Register and disseminates information through the NRC's Regional State Liaison Officers, State Radiation Control Program Directors, and interagency partners.

Additionally, the discontinuation of the annual paper is consistent with the staff's efforts under the transformation initiative, wherein NSIR is evaluating recurring functions that are not mission-critical, and assessing opportunities both to change the timing and periodicity of functions and to realign its efforts on staff's time and resources. The resources saved from the discontinuation of this paper will be used for the staff's review of emergent advanced reactor licensing actions, rulemaking activities and efforts to transform the EP and IR programs.

The staff remains committed to keeping the Commission fully and currently informed of activities in the EP and IR programs by other means such as those identified above while discontinuing this periodic report.

Self-Assessment

Consistent with the NRC's internal control process, the staff will continue to assess the EP and IR programs on a recurring basis to ensure alignment with the NRC's Strategic Plan.

¹² ADAMS Accession No. ML081400510.

¹³ ADAMS Accession No. ML20174A255.

¹⁴ Examples include Press Release Nos. 19-063 and I-00-15 (ADAMS Accession Nos. ML19354B013 and ML003693206, respectively).

CONCLUSION:

The NRC's EP and IR programs satisfied priorities in FY 2020 that directly supported the NRC's mission and strategic plan. The staff continues to demonstrate an ability to maintain a stable and predictable EP program, while also developing and implementing innovative and transformative improvements consistent with the NRC's priorities and objectives. Furthermore, the staff continues to participate in IR activities that maintain and enhance the NRC's readiness to respond to events at licensee facilities, support cooperative intergovernmental relationships, ensure that NRC roles and responsibilities are considered and reflected in national resiliency programs, and ensure the NRC is capable of fulfilling its responsibilities in the national response structure.

COORDINATION:

The Office of the General Counsel reviewed this package and has no legal objection.

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Enclosures:

1. FY 2020 Significant Accomplishments
2. FY 2021 Focus Areas

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INCIDENT RESPONSE PROGRAMS' ACTIVITIES
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WITS200500137 and W200900090

**ADAMS Accession Nos.: ML20280A780 (Pkg), ML20247J612 (Letter) *via e-mail
ML20280A796 (Encl 1), ML20280A797 (Encl 2)**

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