OFFICE OF THE INSPECTOR GENERAL

U.S. NUCLEAR REGULATORY COMMISSION
DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Audit of NRC's Emergency Preparedness Program

OIG-20-A-12
June 23, 2020

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

OFFICE OF THE
INSPECTOR GENERAL

June 23, 2020

MEMORANDUM TO: Margaret M. Doane
Executive Director for Operations

FROM: Dr. Brett M. Baker ***/RA/***
Assistant Inspector General for Audits

SUBJECT: AUDIT OF NRC'S EMERGENCY PREPAREDNESS PROGRAM (OIG-20-A-12)

Attached is the Office of the Inspector General's (OIG) audit report titled *Audit of NRC's Emergency Preparedness Program*.

The report presents the results of the subject audit. Following the June 9, 2020, exit conference, agency staff indicated that they had no formal comments for inclusion in this report.

Please provide information on actions taken or planned on each of the recommendations within 30 days of the date of this memorandum. Actions taken or planned are subject to OIG followup as stated in Management Directive 6.1.

We appreciate the cooperation extended to us by members of your staff during the audit. If you have any questions or comments about our report, please contact me at (301) 415-5915 or Paul Rades, Team Leader, at (301) 415-6228.

Attachment: As stated

Office of the Inspector General

U.S. Nuclear Regulatory Commission
Defense Nuclear Facilities Safety Board

OIG-20-A-12
June 22, 2020

Results in Brief

Why We Did This Review

Statutes and Executive Orders established the basic structure for emergency preparedness following the event at Three Mile Island in 1979. Interagency coordination was built into new requirements for offsite emergency preparedness planning.

The Federal Emergency Management Agency (FEMA) became responsible for ensuring offsite readiness, while NRC continued its responsibility for oversight of licensee onsite emergency plans. FEMA and NRC coordinate their separate and shared radiological emergency preparedness activities and have established communications protocols for incident response.

NRC's responsibilities and processes for response during adverse weather conditions emphasize coordination with Federal, State, and local partners because the response focus is offsite.

The audit objective was to determine whether NRC's emergency preparedness oversight program for nuclear power plants adequately addresses adverse weather conditions and related communications with external stakeholders.

Audit of NRC's Emergency Preparedness Program

What We Found

NRC has addressed adverse weather conditions in its emergency preparedness and coordinates effectively with Federal and State partners. Regional State Liaison Officers (RSLOs) add value to NRC's coordination with Federal and State government partners. However, NRC can extend RSLOs' effective reach at the local level and strengthen RSLO knowledge management. Staff time is a limited resource that constrains the ability to perform outreach and knowledge management. As a result, relationships and coordination could be compromised without support and deliberate staff development for the RSLO role.

Additionally, Federal mandates for digital communications emphasize accessibility and clarity in agencies' public communications. However, the NRC public website about emergency preparedness and incident response is not always useful or understandable for public audiences. Each program office is responsible for website content and must drive change. Improving the accessibility and clarity of website information can reduce obstacles for less frequent users and build trust with those who are not already familiar with NRC's regulatory activities.

What We Recommend

The report contains recommendations to revise existing guidance for RSLOs to promote knowledge management, to identify resources to support outreach to all government partners, and to redesign the emergency preparedness and incident response web pages and improve connections between public web pages with emergency preparedness information. Agency management stated their general agreement with the findings and recommendations in this report.

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ABBREVIATIONS AND ACRONYMS

FAQ	Frequently Asked Question
FEMA	Federal Emergency Management Agency
IDEA	Integrated Digital Experience Act of 2018
IMC	Inspection Manual Chapter
MOU	Memorandum of Understanding
NRC	Nuclear Regulatory Commission
OIG	Office of the Inspector General
RSLO	Regional State Liaison Officer

I. BACKGROUND

Following the March 1979 accident at Three Mile Island, Federal statutes and Executive Orders instituted requirements for offsite preparedness plans for radiological emergency response that would balance onsite plans already required of Nuclear Regulatory Commission (NRC) licensees at the time of the accident. The Federal Emergency Management Agency (FEMA), created in 1979, was assigned the responsibility to ensure offsite readiness. Sixteen planning standards were adopted for evaluation both of licensee plans by the NRC and of State and local offsite response organization plans by FEMA. Interagency coordination was built into these requirements. The basic structure for emergency preparedness established at that time is still in place, with adjustments to address changing circumstances and lessons learned.

NRC and FEMA Responsibilities

The statutory relationship between NRC and FEMA is governed by a Memorandum of Understanding (MOU), last revised in 2015. The MOU delineates the authorities of each agency, as well as their separate and shared responsibilities for radiological emergency preparedness. Under the MOU, NRC and FEMA have developed parallel regulations and guidance documents to align their actions.

NRC reviews and approves nuclear power plant onsite emergency plans as a license condition and inspects equipment and organizational resources that support the plan. Licensees must demonstrate coordination with State and local offsite response organizations.

FEMA evaluates plans for offsite preparedness and provides a determination of adequacy to NRC. NRC reviews FEMA's findings in combination with its own assessment of licensee emergency plans when making a determination of the plans' adequacy and capability of being implemented.[1]

[1] See Title 10 Code of Federal Regulations (10 CFR) Section 50.54(s)(3).

Incident Response

Incident response is practiced as part of emergency preparedness. Both NRC and FEMA participate in or observe exercises and drills in which the NRC licensee and offsite response organizations use plant event scenarios to practice planned response procedures and decisionmaking.

Emergency preparedness planning defines tools such as emergency planning zones, emergency action levels, and protective action guidelines, to narrow and simplify decision choices and communication language for a crisis. While other areas of nuclear power plant oversight focus on preventing equipment or procedural failures that could lead to a radiological emergency, emergency preparedness planning assumes a radiological emergency, natural disaster, or other emergency event has already started. Consequently, planning and practice promote timely, clear communications and appropriate actions for a range of scenarios to protect public safety.

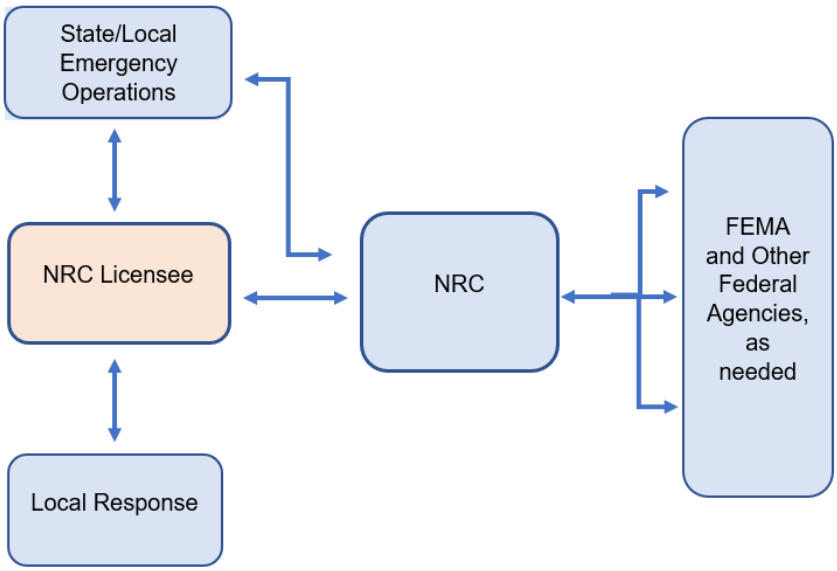
In radiological emergency preparedness, the NRC licensed facility has the responsibility for onsite emergency response, and State, county, and local authorities are responsible for offsite emergency response and actions to protect public safety. NRC and FEMA provide oversight and support to have reasonable assurance of onsite safety and offsite readiness.

In general, communications planned and practiced in the incident response structure flow from the NRC licensee to offsite response organizations and to NRC. NRC monitors event progression, activates support resources as necessary, and shares information as needed with FEMA and other Federal agencies, as well as State and local officials.[2] See Figure 1 for a simplified[3] incident response communication process scheme.

[2] The incident response structure includes a Liaison Team. Should NRC activate resources to support the licensee's response, liaisons in the regional Incident Response Center, on a Site Team, or in the NRC Headquarters Operations Center will manage coordination with government partners at different levels.

[3] Figure 1 represents a very simplified communications structure to highlight the key parties. Extent of involvement of the NRC Region, NRC Headquarters, or any Federal agencies depends on site-specific conditions that would determine NRC's response mode, the Emergency Classification, and Emergency Action Level.

Figure 1: Simplified Incident Response Communications



Source: OIG generated based on NRC documents.

Adverse Weather

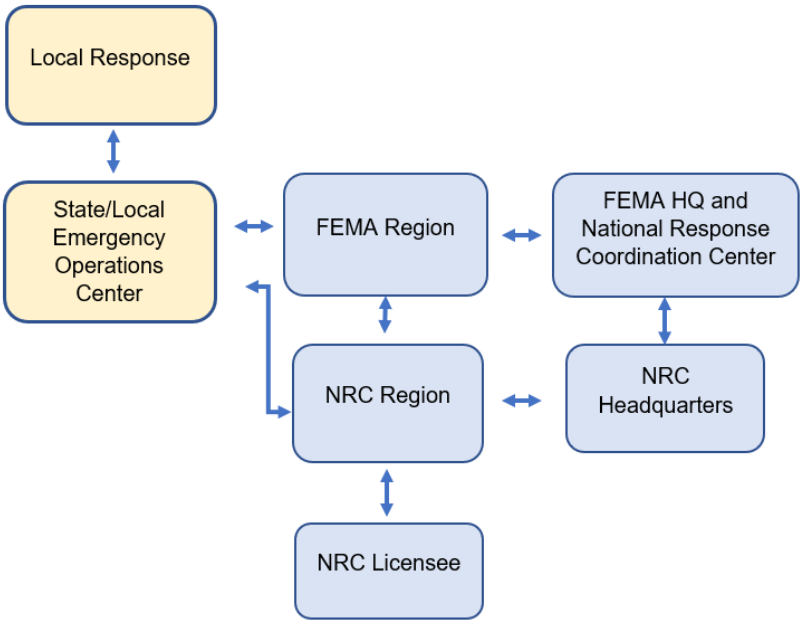
In contrast to incident response scenarios, however, the focus of response to adverse weather conditions affecting areas near NRC-licensed facilities is offsite.[4] Coordination and communication follow NRC and FEMA protocols established for radiological emergency preparedness, originating at the regional level.

The affected NRC region takes the lead for the agency to support FEMA, the State, and the licensee. A Regional State Liaison Officer (RSLO) may deploy to the Emergency Operations Center of the impacted State or local jurisdiction, where the affected FEMA region also sends representatives. The RSLO transmits information, providing answers to FEMA and State questions about an NRC licensee, and reporting offsite conditions back to the NRC region and headquarters.[5] See Figure 2 for a simplified adverse weather communication process scheme.

[4] Although major storms may occur every year, OIG review of Licensee Event Reports from 2014 to 2020 revealed that reactor trips resulting from weather conditions are rare. Licensees take precautionary measures based on forecast conditions. When conditions are likely to exceed what is allowable in a facility's Technical Specifications, a licensee will typically initiate a shutdown prior to storm arrival.

[5] NRC Headquarters staff and the Headquarters Operations Officer also maintain contact with their FEMA counterparts.

Figure 2: Simplified Adverse Weather Communications



Source: OIG generated, based on NRC documents.

Responsible NRC Offices

The four NRC regional offices maintain incident response centers, and regional emergency coordinators specialize in emergency preparedness planning and incident response.

At NRC headquarters, the Office of Nuclear Security and Incident Response directs emergency preparedness policy and licensing activity, develops guidance documents, and staffs and operates the Headquarters Operations Center around the clock to receive reports from licensees. The program office also maintains a roster of trained and qualified staff to be activated for response teams when needed.[6]

The Office of Nuclear Material Safety and Safeguards has responsibility for liaison programs to State and Tribal governments, in addition to the Agreement State Program for byproduct materials oversight.[7]

[6] For Fiscal Year 2020, NRC budgeted 24 full-time equivalents for emergency preparedness licensing and oversight, and 34 full-time equivalents for incident response.

[7] Management Directive 5.2, *Cooperation with States at Commercial Nuclear Power Plants and Other Nuclear Production or Utilization Facilities*, 2016, describes the implementation of NRC policy to cooperate with State governments in protecting public health and safety and the environment.

II. OBJECTIVE

The audit objective was to determine whether NRC's emergency preparedness oversight program for nuclear power plants adequately addresses adverse weather conditions and related communications with external stakeholders. The report appendix contains information on the audit scope and methodology.

III. FINDINGS

OIG found that NRC has addressed adverse weather conditions in its emergency preparedness and incident response program and coordinates effectively with Federal and State partners. However, the agency can strengthen its performance in this area by:

- Extending the effective reach of staff in coordination roles.
- Enhancing outreach to a diverse public through the website.

A. NRC Can Strengthen Coordination with All Government Partners by Enhancing the Effective Reach of Staff in Coordination Roles

NRC procedures focus adverse weather coordination at the regional level with the Regional State Liaison Officers (RSLOs), whose ongoing communications provide the foundation for effective coordination. Strong relationships between NRC and State and local authorities support effective emergency response coordination, but staff time is a limited resource that constrains the ability to perform outreach and knowledge management.

What Is Required

NRC Guidance for Adverse Weather Events Focuses on Regional State Liaison Officers

NRC procedures focus adverse weather coordination at the regional level, with the RSLOs playing an essential coordination role with external stakeholders.

NRC Inspection Manual Chapter (IMC) 1601, *Communication and Coordination Protocol for Determining the Status of Offsite Emergency Preparedness*,[8] and the FEMA *Standard Operating Guide*[9] discuss the specific procedures and roles for severe weather events near NRC licensed facilities and associated FEMA assessments of offsite readiness, when needed, and related communications between NRC and FEMA.

The agencies' procedural documents were organized around emergencies such as to hurricanes with longer forecast periods, but have also been implemented for other natural phenomena such as tornadoes, flooding, wildfires, and winter storms, when local effects of disaster may raise questions about offsite response capabilities. Through the RSLO in the affected region, NRC provides expertise and site-specific information to the State and FEMA response organizations before, during, and after the adverse weather event. The RSLO also updates the NRC Region and Headquarters on conditions reported by State and local response organizations. The NRC licensed facility continues to be responsible for safe operations within the terms of its license and regulatory requirements.

FEMA supports State and local efforts to protect public safety by evaluating offsite radiological emergency response capabilities. Immediately following a severe weather event in the area of an NRC-licensed facility, significant local damage may prompt FEMA to conduct a Preliminary Capabilities Assessment of offsite readiness. Coordination takes place between the FEMA and NRC Regions, and the RSLO will be a

[8] IMC 1601, *Communication and Coordination Protocol for Determining the Status of Offsite Emergency Preparedness*, was revised in 2018. Incident Response Procedure (IRP) 240, Natural Phenomena, guides NRC internal communications in parallel with IMC 1601.

[9] The FEMA *Standard Operating Guide* was revised in 2018.

partner in the process. Based on the assessment, FEMA may determine the need for a more in-depth Disaster Initiated Review of information from offsite response organizations, with coordination between the two agencies heightened at the headquarters level.[10] Should FEMA determine offsite response is impaired, compensating interim actions may be identified.[11]

What We Found

Coordination with Local Governments and RSLO Knowledge Management Present Challenges

RSLOs add value to NRC's coordination with Federal and State government partners. However, NRC can extend RSLOs' effective reach at the local level and strengthen RSLO knowledge management.

The groundwork for adverse weather coordination by NRC has roots in the ongoing government-to-government communications of RSLOs with the States, regional offices of Federal agencies, and Tribal governments. RSLOs provide various kinds of information according to the needs of NRC's government partners, including, for example, licensee reports and NRC inspection findings, as well as explanations of NRC regulatory activities and processes. RSLOs also support the planning of emergency preparedness exercises and can fill the liaison role during an exercise.

NRC Coordination with FEMA

FEMA Radiological Emergency Preparedness Program officials confirmed the value of information and coordination provided by the RSLOs. They

[10] From 2016 through 2019, FEMA performed Preliminary Capabilities Assessments following seven adverse weather events affecting a total of 10 facilities, and two storms led to Disaster Initiated Reviews for a total of five facilities. In each Disaster Initiated Review, by the time the review was completed in a few days, conditions had improved, or compensatory resources identified, so FEMA found no impairment of offsite readiness.

[11] In general, the degraded condition of offsite infrastructure and response capabilities does not solely dictate the need for immediate action by the licensee. A licensee is not required under 10 CFR 50.54(s)(2)(ii) to immediately shut down due to degraded offsite emergency response infrastructure or response capabilities, as long as the reactor continues to operate within its Technical Specification safety limits.

described RSLOs as "essentially part of the FEMA team" during an adverse weather event.

While the FEMA region coordinates the Federal response to a natural disaster, the NRC RSLOs proactively support planning and are active partners when adverse weather occurs in the area near a nuclear power plant. FEMA staff noted that RSLOs and regional staff are proactive and flexible in responding as conditions demand. Whether formal or informal, post-event discussions identify effective solutions to incorporate as best practices.

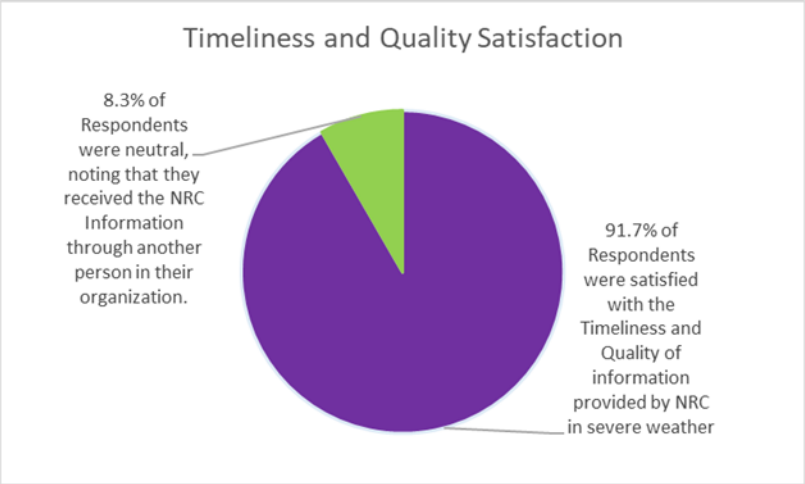
NRC regional and headquarters staff worked with FEMA over recent years to improve communications in the established partnership. Updates to key NRC policy and procedural documents were coordinated with revisions to parallel FEMA documents, further illustrating cooperative improvements.

NRC Coordination with States

Governor-appointed State liaisons to NRC also value RSLO work. An OIG survey of State liaisons to NRC verified the effectiveness of regional coordination with the States. Respondents were overwhelmingly positive about the work of the RSLOs, both in emergencies and routine communications.

The majority of responding State officials had worked with NRC regional staff for adverse weather events, and they were satisfied with the timeliness and quality of information provided by NRC during the event, as shown in Figure 3.

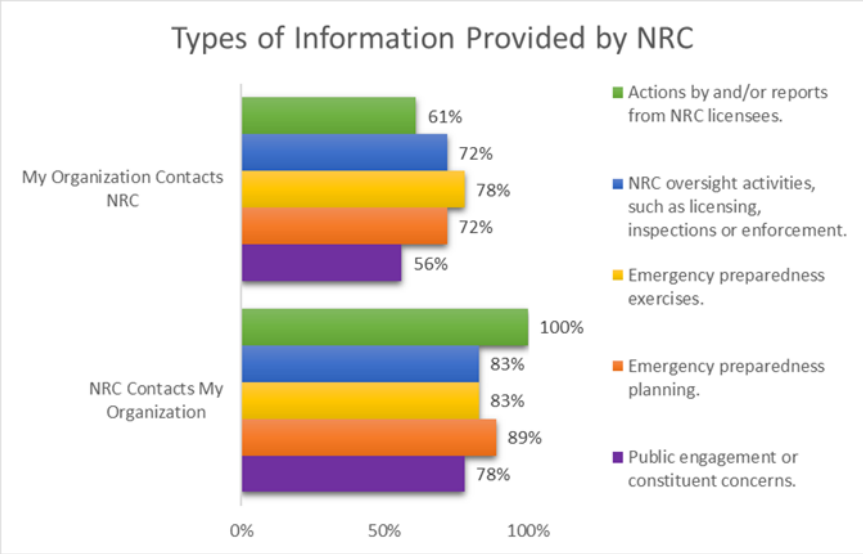
Figure 3: State Officials – Timeliness and Quality of Information in Adverse Weather



Source: OIG

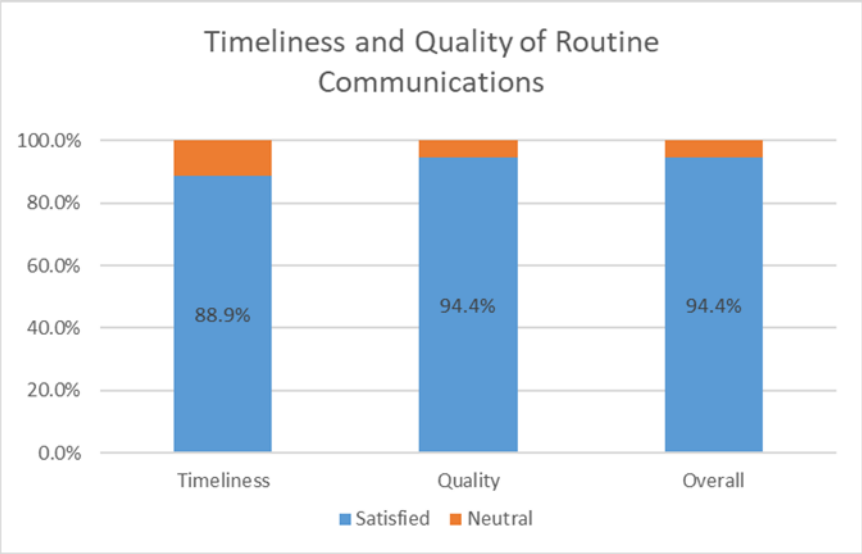
State officials also noted the variety and quality of information provided by NRC through routine communications, as shown in Figures 4 and 5. State officials added comments, such as that when necessary, the RSLOs take additional time and effort to clearly explain the significance of the information.

Figure 4: Types of Information Sought by States and Provided by NRC



Source: OIG.

Figure 5: State Officials – Timeliness and Quality of NRC Routine Communications



Source: OIG

NRC Coordination with Local Governments

The scope and diversity of local government interest can present an outreach and coordination challenge for NRC. County and local governments need to understand about emergency preparedness and NRC's regulatory roles and authorities. Local government misunderstanding of NRC's regulatory role can present hurdles to both NRC and FEMA. The NRC Regions address communications with local governments in different ways, depending on resource availability.

- For example, in one Region, when a public meeting related to a licensed facility is scheduled for the evening, the RSLO schedules a separate daytime meeting for NRC representatives to present the same information to local officials, who can ask questions without taking time away from their constituents.

- In another Region, the RSLO conducts government-to-government meetings with county and local governments that express interest, in the same way that such meetings are conducted with State or Tribal governments.

RSLOs may also attend regional meetings sponsored by FEMA to discuss the emergency preparedness exercise schedule for the year, as these are

an opportunity for broad outreach to State, county, and local organizations in attendance.

The number and diversity of local jurisdictions around nuclear power plants could create a steady demand for this type of outreach by RSLOs. Not all local officials can be reached equally by the six RSLOS currently on staff in the Regions. See Table 1 for the distribution of RSLOs among the NRC Regions.

Table 1: Distribution of NRC RSLOs

NRC Region	RSLOs
Region I	1
Region II	2
Region III	2
Region IV	1

Source: OIG

RSLO Knowledge Management

NRC has not always developed backups or replacements for RSLOs in a systematic way. The RSLO role requires a unique skillset that combines technical experience in radiological oversight or emergency preparedness with relationship-building skills. The role involves modelling good communications by identifying stakeholders' needs, concerns, and information requirements. The work of the RSLOs ensures a relationship exists between governments at the regional level before any emergency occurs.

Diverse experience can support the liaison role. The current RSLOs had prior experience in NRC reactor inspections, materials oversight, and emergency preparedness programs, and in licensee operations, State radiological control programs, and FEMA radiological emergency preparedness programs. The current RSLOs share information weekly and meet annually, exchanging best practices as well as staying up-to-date on policy, guidance, and trends.

The existing guidance document for the RSLO role has fallen into disuse, as the current RSLOs rely on experience, shared best practices, and the needs of the States in their respective regions. SL-100, "*Regional State Liaison Officer*," last revised in 2010, describes the role and provides suggestions for how to prepare for it, but it is not a qualification program. At the same time, NRC's transformation initiatives are driving program reviews that can support knowledge management for this role. The Office of Nuclear Material Safety and Safeguards is conducting a review of its procedures for NRC State and Tribal programs, including SL-100. The Office of Nuclear Security and Incident Response is restructuring the incident response program, including review and streamlining of all procedures to support qualifications for and staffing of all response positions.

Why This Occurred

Staff Time Is a Limited Resource That Constrains the Ability to Perform Outreach and Knowledge Management

RSLOs are not able to do everything or be everywhere because their time is a limited resource. However, there may not be alternate sources of information for local officials about NRC processes. The liaison program was set up for the States, and they remain the priority. Also, NRC outreach to local jurisdictions respects how State constitutions vary in assigning authorities to local jurisdictions. Given the potential demands for liaison resources, Regions must make decisions on how to deploy the RSLOs most effectively in their respective areas. Knowledge management may therefore not always be a primary focus.

Why This Is Important

Strong Relationships Between NRC and State and Local Authorities Support Effective Emergency Response Coordination

Effective communication that meets the States' needs builds trust between NRC and the States. Trust supports effective communications in emergency preparedness and response. Local governments included in

NRC outreach efforts to the States have a better understanding of NRC's responsibilities and authorities as a regulator. Well-informed local officials may in turn be better prepared to make decisions and respond to their constituents' questions, extending the emergency preparedness benefits of the RSLOs' relationship-building activities. However, as other OIG audits have shown,[12] NRC retirement trends could reduce numbers of highly experienced staff, thereby compromising established relationships and coordination without deliberate development of staff for the RSLO role.

Recommendations

OIG recommends that the Executive Director for Operations

1. Revise the existing guidance in SL-100 to capture best practices and serve as a knowledge management tool for the Regional State Liaison Officer role.

2. Coordinate with government partners at the Federal, State, and local levels to identify resources, such as recorded training videos or presentations, to supplement Regional State Liaison Officers' outreach.

B. NRC Website Needs Content and Design Changes to Improve Accessibility and Clarity

Federal mandates for digital communications emphasize accessibility and clarity in agencies' public communications. However, the NRC public website about emergency preparedness and incident response is not always useful or understandable for public audiences. Because the program office has responsibility for website content and must prioritize changes, information on NRC's website does not account for diverse public needs and may hinder NRC's ability to build trust among broader audiences.

[12] Examples of recent OIG reports are: *Evaluation of NRC's Headquarters Operations Center Staffing*, OIG-18-A-16; *Audit of NRC's Transition Process for Decommissioning Power Reactors*, OIG-19-A-16; *Audit of NRC's Cyber Security Inspections at Nuclear Power Plants*, OIG-19-A-13; *Inspector General's Assessment of the Most Serious Management and Performance Challenges Facing the Nuclear Regulatory Commission in Fiscal Year 2020*, OIG-20-A-01.

What Is Required

Federal Mandates and Best Practices for Effective Communications Emphasize Accessibility and Clarity in Agencies' Public Communications

Federal Mandates and Guidance

According to the 21st Century Integrated Digital Experience Act of 2018 (IDEA), Federal agencies must improve agency digital services by designing new websites around user goals, needs, and behaviors. IDEA consolidates earlier statutory mandates and guidance for agencies, including Office of Management and Budget Memorandum M-17-06, "Policies for Federal Agency Public Websites and Digital Services."[13] Noting that agency websites are the primary means by which the public receives information from and interacts with the Federal government, M-17-06 instructs agencies to provide authoritative and reliable information. Authoritative information is useful and understandable as well as correct. IDEA also reemphasizes longstanding Federal objectives of using Plain Language and Plain Writing,[14] which support addressing different audiences separately and organizing information to meet users' needs.

Best Practices for Federal Risk Communications

Best practices from government technical agencies reiterate the need for these communications principles in risk communications. Specifically, messages should be shaped for audiences with different information needs, because there is not a single "public." Agencies should consider the perspectives of diverse audiences to build trust as an authoritative information source. Agency communicators should understand that non-technical audiences define risk using qualitative factors rather than experts' quantitative means and use Plain Language principles to convey concepts clearly from that perspective.

[13] Office of Management and Budget Memorandum M-17-06, "Policies for Federal Agency Public Websites and Digital Services" was published in November, 2016.

[14] Federal guidelines for Plain Language and Plain Writing are available at plainlanguage.gov.

What We Found

NRC's Emergency Preparedness Website Is Not Always Useful or Understandable for Public Audiences

Analysis of current NRC web pages for emergency preparedness and incident response reveals that information is correct, but not always useful or understandable for public audiences. For example:

- The emergency preparedness web pages contain dense text paragraphs that are hard to read or to scan for information of importance to the reader. Language derived from NRC policy documents is not translated into plain language. Jargon is not always defined. The significance of key concepts or documents provided is not clear.

- The pages do not address the information needs of different audiences. For example, Frequently Asked Questions, or "FAQs," provide guidance for licensees on NRC policies and oversight. FAQs for non-technical website visitors are not clearly labelled.

- Although the web pages are periodically reviewed, duplicative or dead hyperlinks show the current content and design may be hard to keep up-to-date.

Additionally, key information of interest to non-technical audiences is hard to find. For example, Office of Nuclear Reactor Regulation web pages on individual nuclear power facilities have links to a FEMA list of State emergency management agency pages, which in turn can connect the public to emergency preparedness and response information for specific plants or local jurisdictions. However, the emergency preparedness and response pages do not connect to this resource.

Existing resources show NRC has the tools to create more user-friendly webpages. For example, the recent Reactor Oversight Process Enhancement web page[15] shows the potential benefits of redesign by

[15] The new web page is ROP 2020.

dividing information into sections and judicious use of links to key documents and explanatory information. In addition, the Office of Public Affairs has developed plain language "backgrounder" documents and made clear videos about emergency preparedness and incident response available,[16] but they are not fully utilized to support clear emergency preparedness website communications.

Why This Occurred

Each Program Office Is Responsible for Website Content and Must Drive Change

Each NRC program office – in this case, the Office of Nuclear Security and Incident Response – has responsibility for creating, reviewing, and updating web page content related to its programs. The website maintenance process favors simple updates, such as replacing documents on the website. The program office must prioritize change, such as a new presentation of information to serve different audience, and seek out agency resources to support the effort. A focus on technical and regulatory details diminishes effectiveness by overlooking accessibility and clarity for a general public audience that lacks subject matter expertise or familiarity with NRC emergency preparedness policies and procedures.

Why This Is Important

Website May Hinder NRC's Ability to Build Trust Among Broader Audiences

Emergency preparedness information on NRC's website does not account for diverse public needs and perspectives. Website analytics performed by a contractor for NRC staff show a feedback loop in which most users are already familiar with NRC activities and know what they need and where to find it on the public website. However, a minority of users' needs may be overlooked. Improving the accessibility and clarity of website

[16] Examples include the Backgrounder on Emergency Preparedness at Nuclear Power Plants, and the video "How the US NRC Responds to an Emergency."

information, while also making information available to all users and not just those familiar with NRC activities, can reduce obstacles for less frequent users and build trust with those who are not already familiar with NRC's regulatory activities.

Recommendation

OIG recommends that the Executive Director for Operations

3. Make content and design changes to improve accessibility and clarity of the emergency preparedness and incident response public web pages, including

    a. Use Plain Language and best practices to provide information targeting specific audiences (e.g., industry, government partners, general public).

    b. Improve connections between the program office pages with emergency preparedness information and existing public affairs resources.

IV. CONSOLIDATED LIST OF RECOMMENDATIONS

OIG recommends that the Executive Director for Operations

1. Revise the existing guidance in SL-100 to capture best practices and serve as a knowledge management tool for the Regional State Liaison Officer role.

2. Coordinate with government partners at the Federal, State, and local levels to identify resources, such as recorded training videos or presentations, to supplement Regional State Liaison Officers' outreach.

3. Make content and design changes to improve accessibility and clarity of the emergency preparedness and incident response public web pages, including

    a. Use Plain Language and best practices to provide information targeting specific audiences (e.g., industry, government partners, general public).

    b. Improve connections between the program office pages with emergency preparedness information and existing public affairs resources.

V. AGENCY COMMENTS

An exit conference was held with the agency on June 9, 2020. Prior to this meeting, agency management reviewed a discussion draft and provided comments that have been incorporated into this report, as appropriate. After reviewing a revised draft, agency management stated their general agreement with the findings and recommendations and opted not to provide formal comments for inclusion in this report.

Appendix

OBJECTIVE, SCOPE, AND METHODOLOGY

Objective

The audit objective was to determine whether NRC's emergency preparedness oversight program for nuclear power plants adequately addresses adverse weather conditions and related communications with external stakeholders.

Scope

The audit focused on how NRC coordinates and communicates information about emergency preparedness and response with external stakeholders, using adverse weather events as a case study. OIG conducted this performance audit from September 2019 through April 2020, at NRC headquarters in Rockville, MD, NRC Region II in Atlanta, GA, and Birmingham, AL. Internal controls related to the audit objective were reviewed and analyzed.

Methodology

To accomplish the audit objectives, OIG analyzed relevant statutes, regulations, and guidance including:

- "Memorandum of Understanding Between the Department of Homeland Security/Federal Emergency Management Agency and Nuclear Regulatory Commission Regarding Radiological Emergency Response, Planning, and Preparedness," December 7, 2015.

- NRC Inspection Manual Chapter (IMC) 1601, *Communication and Coordination Protocol for Determining the Status of Offsite Emergency Preparedness*, July 1, 2018.

- Federal Emergency Management Agency (FEMA) *Interim Standard Operating Guide*, August 17, 2018.

- Public Law 115-336, The 21st Century Integrated Digital Experience Act (IDEA), December 20, 2018.

- Office of Management and Budget Memorandum M-17-06, "Policies for Federal Agency Public Websites and Digital Services," November 8, 2016.

- *Federal Plain Language Guidelines*, Revision 1, May 2011.

- Public Law 111-274, Plain Writing Act of 2010, October 13, 2010.

OIG analyzed documents to understand the frequency and scope of weather-related events, including:

- Licensee Event Reports to NRC from 2014 to 2020.

- FEMA reports of Preliminary Capabilities Assessments and Disaster Initiated Reviews from 2016 through 2019.

OIG conducted reviews to determine whether the agency coordinates and communicates accurate, current, and clear information with external stakeholders.

OIG surveyed representatives of State governments who work with NRC Regional State Liaison Officers and other staff. The survey was performed to verify testimonial evidence gathered during the audit from key individuals in coordination and communication with the States about emergency preparedness and during severe weather events that affect offsite response capabilities near NRC licensed nuclear power plants. The questions were intended to obtain basic feedback about how often and how effectively those responsibilities are carried out and identify any areas of improvement. OIG received 19 responses from 41 survey recipients. Responses were collected anonymously and quantitatively summarized as a census of the target group, rather than a sample.

Further reviews included:

- OIG interviewed staff from FEMA Headquarters and Regional Offices to understand how the NRC interacts with other government entities during a severe weather event.

- OIG assessed NRC public web pages and social media platforms regarding emergency preparedness and incident response for how well they met NRC and Federal digital communications standards and best practices.

- OIG observed an emergency preparedness exercise to understand how NRC staff communicate with the licensee and government partners in incident response.

Additionally, OIG interviewed NRC staff and management from the NRC Regions, Office of Nuclear Security and Incident Response, Office of Nuclear Material Safety and Safeguards, Office of Public Affairs, and the NRC Regions.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Throughout the audit, auditors considered the possibility of fraud, waste, and abuse in the program.

The audit was conducted by Paul Rades, Team Leader; Amy Hardin, Audit Manager; and Chanel Stridiron, Senior Auditor.

TO REPORT FRAUD, WASTE, OR ABUSE

Please Contact:

Email: Online Form

Telephone: 1-800-233-3497

TTY/TDD: 7-1-1, or 1-800-201-7165

Address: U.S. Nuclear Regulatory Commission
Office of the Inspector General
Hotline Program
Mail Stop O5-E13
11555 Rockville Pike
Rockville, MD 20852

COMMENTS AND SUGGESTIONS

If you wish to provide comments on this report, please email OIG using this link.

In addition, if you have suggestions for future OIG audits, please provide them using this link.