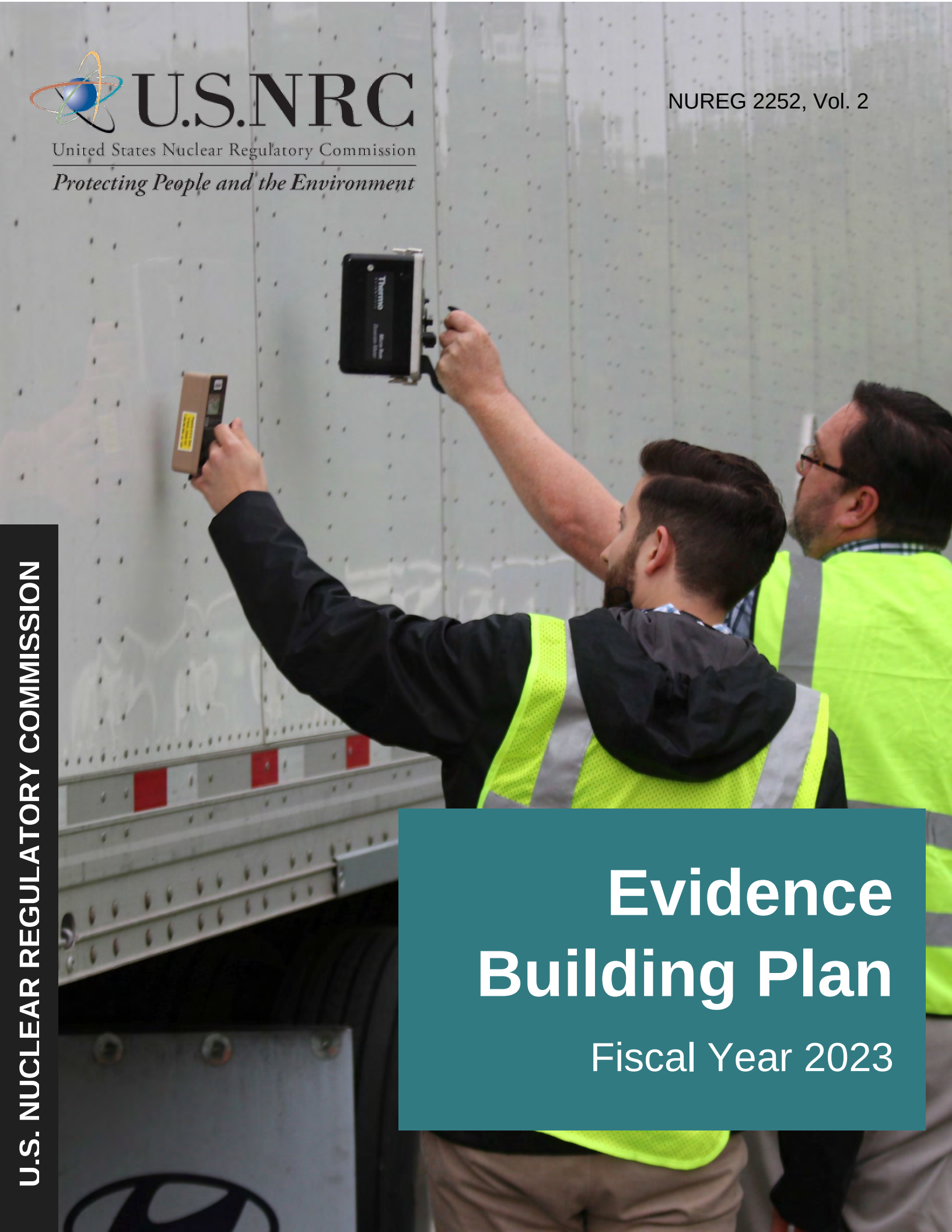
U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

NUREG 2252, Vol. 2



U.S. NUCLEAR REGULATORY COMMISSION

Evidence Building Plan

Fiscal Year 2023

AVAILABILITY OF REFERENCE MATERIALS IN NRC PUBLICATIONS

NRC Reference Material

As of November 1999, you may electronically access NUREG-series publications and other NRC records at the NRC's Library at www.nrc.gov/reading-rm.html. Publicly released records include, to name a few, NUREG-series publications; *Federal Register* notices; applicant, licensee, and vendor documents and correspondence; NRC correspondence and internal memoranda; bulletins and information notices; inspection and investigative reports; licensee event reports; and Commission papers and their attachments.

NRC publications in the NUREG series, NRC regulations, and Title 10, "Energy," in the *Code of Federal Regulations* may also be purchased from one of these two sources:

1. **The Superintendent of Documents**
   U.S. Government Publishing Office
   Washington, DC 20402-0001
   Internet: https://bookstore.gpo.gov/
   Telephone: (202) 512-1800
   Fax: (202) 512-2104

2. **The National Technical Information Service**
   5301 Shawnee Road
   Alexandria, VA 22312-0002
   Internet: https://www.ntis.gov/
   1-800-553-6847 or, locally, (703) 605-6000

A single copy of each NRC draft report for comment is available free, to the extent of supply, upon written request as follows:

Address: **U.S. Nuclear Regulatory Commission**
Office of Administration
Digital Communications and Administrative Services Branch
Washington, DC 20555-0001
E-mail: Reproduction.Resource@nrc.gov
Facsimile: (301) 415-2289

Some publications in the NUREG series that are posted at the NRC's Web site address www.nrc.gov/reading-rm/doc-collections/nuregs are updated periodically and may differ from the last printed version. Although references to material found on a Web site bear the date the material was accessed, the material available on the date cited may subsequently be removed from the site.

Non-NRC Reference Material

Documents available from public and special technical libraries include all open literature items, such as books, journal articles, transactions, *Federal Register* notices, Federal and State legislation, and congressional reports. Such documents as theses, dissertations, foreign reports and translations, and non-NRC conference proceedings may be purchased from their sponsoring organization.

Copies of industry codes and standards used in a substantive manner in the NRC regulatory process are maintained at—

The NRC Technical Library
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

These standards are available in the library for reference use by the public. Codes and standards are usually copyrighted and may be purchased from the originating organization or, if they are American National Standards, from—

American National Standards Institute
11 West 42nd Street
New York, NY 10036-8002
Internet: www.ansi.org
(212) 642-4900

Legally binding regulatory requirements are stated only in laws; NRC regulations; licenses, including technical specifications; or orders, not in NUREG-series publications. The views expressed in contractor prepared publications in this series are not necessarily those of the NRC.

The NUREG series comprises (1) technical and administrative reports and books prepared by the staff (NUREG–XXXX) or agency contractors (NUREG/CR–XXXX), (2) proceedings of conferences (NUREG/CP–XXXX), (3) reports resulting from international agreements (NUREG/IA–XXXX),(4) brochures (NUREG/BR–XXXX), and (5) compilations of legal decisions and orders of the Commission and the Atomic and Safety Licensing Boards and of Directors' decisions under Section 2.206 of the NRC's regulations (NUREG-0750), (6) Knowledge Management prepared by NRC staff or agency contractors (NUREG/KM-XXXX).

ABSTRACT

The U.S. Nuclear Regulatory Commission (NRC or the agency) is an independent agency established by the Energy Reorganization Act of 1974, which began operations in 1975 as a successor to the Atomic Energy Commission. The NRC is required by the Foundations for Evidence-Based Policymaking Act of 2018 to develop an agency evidence-building plan. An evidence-building plan is a systematic approach for identifying and addressing priority questions relevant to the agency's programs, policies, and regulations. More broadly, it is a coordination tool to engage stakeholders in evidence planning and building to help achieve an agency's mission. The evidence-building plan is intended to emphasize and foster an agency culture of learning and continuous improvement. Once an evidence-building plan is implemented, decision-makers can use the resulting evidence to guide choices to improve the agency programs, policies, and regulations. The evidence-building plan includes nine priority questions to support agency needs and fiscal year (FY) 2022–2026 strategic goals and objectives. This FY 2023 update provides information regarding developments since the initial publication of the plan in FY 2022, including the status of the NRC's actions established to address each of the priority questions.

TABLE OF CONTENTS

Evidence-Building Plan
Fiscal Year 2023 Update

FOUNDATIONS FOR EVIDENCE-BASED POLICYMAKING ACT OF 2018

The Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act),[1] signed into law on January 14, 2019, emphasizes collaboration and coordination to advance data and evidence-building functions in the Federal Government. The Evidence Act statutorily mandates Federal evidence-building activities, open Government data, confidential information protection, and statistical efficiency. Evidence includes fact finding, performance measurement, policy analysis, and program evaluation used to make critical decisions about program operations, policy, and regulations, and to gain visibility into the impact of resource allocation on achieving program objectives. As stated within implementation guidance issued by the Office of Management and Budget (OMB), "The Evidence Act builds on longstanding principles underlying Federal policies and data infrastructure investments supporting information quality, access protection and evidence building and use."[2] The Evidence Act requires the U.S. Nuclear Regulatory Commission (NRC), as a Chief Financial Officers Act agency, to develop an evidence-building plan.

ABOUT THE NRC

Congress created the NRC as an independent agency in 1974. Its mission is to license and regulate the Nation's civilian use of radioactive materials, to provide reasonable assurance of adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. The NRC regulates commercial nuclear power plants, nuclear fuel cycle facilities, decommissioning of licensed facilities and sites, nuclear waste, and other uses of nuclear materials, such as the medical use of radioactive materials, through licensing, inspection, and enforcement of its requirements.

The NRC is committed to meeting the intent of the Evidence Act by evaluating the effectiveness and efficiency of its programs and their contributions to achieving the agency's mission. Evaluations and other evidence-building activities conducted by the NRC are expected to adhere to the standards discussed in the NRC's "Evidence-Building and Evaluation Policy Statement" (86 FR 29683; June 3, 2021).

PURPOSE

The evidence-building plan is a systematic approach for identifying and addressing priority questions relevant to the agency's programs, policies, and regulations.[3] More broadly, it is a

1 Pub. L. No. 115-435, 132 Stat. 5529 (2019)
2 OMB, M-19-23, "Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance," pp. 1–2, July 10, 2019
3 5 U.S.C. § 312(b)

coordination tool to engage stakeholders in evidence planning and building to help achieve an agency's mission. The evidence-building plan is intended to emphasize and foster an agency culture of learning and continuous improvement. Once an evidence-building plan is implemented, decision-makers can use the resulting evidence to guide choices to improve the agency programs, policies, and regulations. The priority questions in the evidence-building plan include key areas to support agency needs and the fiscal year (FY) 2022–2026 strategic goals and objectives.

METHODOLOGY

The priority questions for the evidence-building plan were solicited from internal and external stakeholders using multiple approaches. Internally, the NRC used a crowd-sourcing platform to solicit potential priority questions and feedback from its staff. The NRC staff submitted potential priority questions with topics ranging from automating data generation to improving agency processes. Externally, the NRC solicited stakeholder input to develop the strategic plan, including the priority questions for the evidence-building plan. In September 2020, representatives of various stakeholder groups (e.g., industry, the public) participated in a public meeting and provided comments in response to a *Federal Register* (FR) notice. The NRC reviewed the input received and combined it with the input provided by NRC staff to develop a set of proposed priority questions that align with the agency's strategic priorities. The NRC's Data Governance Board, comprising senior agency officials, further refined the priority questions, added new questions, and endorsed the finalized set of proposed priority questions.

Throughout the FY 2022–2026 strategic planning period, NRC staff will monitor the agency's progress in completing actions associated with each of the established priority questions. As work progresses, certain key actions, methods, and analytic approaches established in the initial FY 2022 Evidence-Building Plan may change, based on emergent developments and evolving strategies. Such changes are reflected in the discussion of each of the priority questions throughout this update. Additionally, this update discusses the status of completed actions and other relevant developments associated with each priority question.

EVIDENCE-BUILDING PLAN PRIORITY QUESTIONS

Priority questions help the agency focus, drive planning activities, and prioritize improvements with the greatest impact on agency programs, policies, and regulations by using evidence to make informed decisions. Below are the NRC's priority questions for the evidence-building plan, categorized by topic. A summary accompanies each priority question and includes the purpose of the question and the type of evidence-building activity anticipated. For each question, the associated evidence-building activity uses data and information to develop evidence that allows decision-makers to make informed decisions. The NRC will update information such as status, resources, analytical approaches, and key questions for each priority question on the Evidence-Building Activities webpage.[4]

[4] The Evidence-Building Activities webpage is available at https://www.nrc.gov/about-nrc/plans-performance/evidence-building-and-evaluation.html.

Each priority question includes the following:

- **Key Actions, Methods, and Analytic Approaches:** Clearly written, actionable, and time-dependent actions the NRC will take to answer the priority questions, including the methods and analytic approaches.
- **Anticipated Data Needs and Tools:** Summary of the expected data needs and tools to answer the priority questions. Additional data needs may emerge as the priority question is being answered.
- **Anticipated Challenges:** Summary of challenges or obstacles that may be encountered during the process.
- **Benefits:** Summary of incremental and overall benefits for the agency as it completes key actions.

Priority questions are related to the strategic goals in the NRC's Strategic Plan for FY 2022–2026.

STRATEGIC PLAN GOAL 1—ENSURE THE SAFE AND SECURE USE OF RADIOACTIVE MATERIALS

Priority Question 1: How can the NRC improve the agency's licensing and oversight programs based on recent operational experience and lessons learned from the Coronavirus Disease 2019 (COVID-19) pandemic?

Priority Question 2: What data received and maintained would be most beneficial for use in advanced analytical tools (e.g., machine learning, artificial intelligence) to support NRC decision-making?

Priority Question 3: To what extent are the NRC's computer codes capable of supporting independent analysis of the safety of advanced reactor designs and operations?

STRATEGIC PLAN GOAL 2—CONTINUE TO FOSTER A HEALTHY ORGANIZATION

Priority Question 4: To what extent are licensing actions performed by the NRC becoming more or less resource intensive over time and have there been any changes in work product quality?

Priority Question 5: To what extent are the NRC's workforce planning processes adequately accommodating potential workload fluctuations?

Priority Question 6: What process improvements can be implemented to make the NRC a more modern, risk-informed regulator and how are they aligned with performance indicators?

Priority Question 7: How can the NRC better leverage research conducted through NRC-sponsored university research and development grants?

STRATEGIC PLAN GOAL 3—INSPIRE STAKEHOLDER CONFIDENCE IN THE NRC

Priority Question 8: How can the NRC improve external engagement to inspire stakeholder confidence?

Priority Question 9: To what extent are the NRC's programs, policies, and activities addressing environmental justice?

PRIORITY QUESTIONS FOR STRATEGIC PLAN GOAL 1: ENSURE THE SAFE AND SECURE USE OF RADIOACTIVE MATERIALS

PRIORITY QUESTION 1: HOW CAN THE NRC IMPROVE THE AGENCY'S LICENSING AND OVERSIGHT PROGRAMS BASED ON RECENT OPERATIONAL EXPERIENCE AND LESSONS LEARNED FROM THE COVID-19 PANDEMIC?

SUMMARY

Gathering lessons learned and incorporating best practices from recent licensing and oversight activities could help the NRC staff to focus on the activities most important to safety. In response to the challenges of the COVID-19 pandemic, the NRC quickly identified temporary alternative and risk-informed methods for conducting licensing and oversight activities while continuing to provide reasonable assurance of adequate protection of public health and safety. Some of these temporary changes could potentially streamline processes for licensing and oversight activities in the long term while continuing to adequately protect public health and safety.

The NRC will identify lessons learned and collectively document temporary changes made to agency licensing and oversight processes in response to the COVID-19 pandemic. The NRC will further analyze these and other lessons learned to determine potential efficiencies to the agency's licensing and oversight processes.

Key Actions, Methods, and Analytic Approaches

(1) Complete a review of NRC licensing and oversight programs, analyzing data such as licensing actions, exemption requests, inspections, performance assessment, enforcement, allegations, investigations, and incident response.

(2) Perform an assessment to determine what approaches to licensing and oversight were most effective during the COVID-19 pandemic. Conduct benchmarking with other Federal agencies and international nuclear regulators in support of the assessment.

(3) Assess whether modifications should be made to adjust schedules or periodicity, streamline activities, or perform activities remotely.

(4) Analyze how the licensing and inspection programs leverage technology and identify opportunities to use technology to improve programmatic efficiency and effectiveness.

(5) Identify guidance, processes, and procedures that could be modified to incorporate improvements based on recent operational experience and lessons learned from the COVID-19 pandemic.

Anticipated Data Needs and Tools

- Licensees and public stakeholder groups and organizations provided extensive communications to the NRC during the COVID-19 pandemic related to requests for flexibility, including modifications to or exemptions from established scheduled and regulatory requirements. Staff will use existing data and solicit new information from stakeholders to support the analysis.

Anticipated Challenges

- It may prove difficult to fully assess the temporary actions taken in response to the COVID-19 pandemic in a way that translates the lessons learned into potential regulatory reform, given the unique and unprecedented challenges presented by the pandemic.

Benefits

- With respect to incremental benefits, actions that the NRC has taken during the COVID-19 pandemic can be reviewed to determine whether there is a benefit to modifying the processes and procedures in the agency's Pandemic Plan or Continuity of Operations Plan to ensure effective and efficient plans for future emergency situations.

Status

- In March 2023, staff from the Office of Nuclear Reactor Regulation (NRR) COVID-19 Coordination Team issued a final lessons-learned report related to operating reactor licensing activities during the COVID-19 public health emergency response.[5] This final report closed out remaining recommendations that had been discussed in a prior report from October 2021[6]. Using individual interviews with cognizant staff, the review team identified lessons learned in three main areas:

  (1) communications and information sharing
  (2) development of infrastructure to support review of licensing submittals
  (3) processing licensee requests

  Recommendations included modifications to existing processes, procedures, and supporting information technology systems to enhance the NRC's preparedness for handling emergent licensing actions during future events. The NRC plans to incorporate certain updates to its processes in an upcoming periodic update to LIC-103, "Exemptions from NRC Regulations."[7]

- In September 2022, the NRC finalized a summary report developed by a working group tasked with identifying lessons learned and best practices and making recommendations

---

5 NRC Agencywide Documents Access and Management System (ADAMS) Accession No. ML22264A309

6 ML21252A070

7 The current version of LIC-103, Revision 2, can be found via ADAMS Accession No. ML19155A121.

to improve NRC readiness for future emergencies and nonemergency conditions.[8] This report served as a follow-up to an initial lessons-learned report issued in January 2021.[9]

The review team developed a 24-question general survey, which received 248 responses (with a response rate of about 40 percent). The team also gathered additional information from select NRC personnel regarding information technology matters, inspector-related travel challenges, and senior management perspectives. Using this information, the review team developed recommendations focusing on three key areas:

(1) inspection information technology solutions

(2) onsite and remote inspection techniques

(3) potential enhancements to the NRC's Reactor Oversight Process

The recommendations included changes to program guidance to incorporate consistent criteria, resources, evaluation methodology, and inspection prioritization for potential future events. Additional recommendations included changes to better support hybrid inspection activities and interaction with licensee personnel, as appropriate, using available controls, guidance, and risk mitigation strategies to ensure inspections are efficient and effective. The report also included recommendations to better leverage available information-sharing capabilities, based on lessons learned, and to establish standards, expectations, and updated memoranda of understanding with licensees to reflect and properly control updated approaches.

The NRC plans to incorporate lessons learned into future revisions of Inspection Manual Chapter (IMC) 2515, "Light Water Reactor Inspection Program—Operations Phase," including Appendix E, "Inspection Program Modifications During Public Health Emergencies or Other Conditions Restricting Inspector Onsite Presence."[10]

- In November 2021, a working group comprising representatives from the NRC's regional offices and the Office of Nuclear Material Safety and Safeguards (NMSS) completed an assessment of the various practices, adjustments, processes, and inspection techniques used to implement the agency's nuclear materials and waste oversight programs during the COVID-19 pandemic.[11]

  The working group administered a survey, which received responses from 53 staff members representing both NMSS and the regional offices. The working group also gathered information during a series of interviews with inspectors, first-line supervisors, and managers, and during two public meetings with community, industry, and local

8 ML22224A124

9 ML20308A389

10 The NRC issued a revision of IMC 2515, Appendix E, including certain changes related to lessons learned from the COVID-19 pandemic, on June 26, 2023 (ML23055B053).

11 ML21294A368

government groups. Additionally, information was obtained during government-to-government meetings with representatives from NRC Agreement States.[12]

As a result of its assessment, the working group developed a set of proposed recommendations. These recommendations included implementing lessons learned regarding inspection activities at licensed facilities in the event of a future public health emergency, while resuming the conduct of onsite inspection activities during times of normal operation to avoid challenges identified during the conduct of remote and hybrid inspection activities. The report did identify opportunities to continue to use certain scheduling flexibilities that were found to be useful during the public health emergency, and it also identified opportunities to better leverage available information-sharing capabilities based on lessons learned. Implemented recommendations are incorporated into associated inspection guidance.

- With the completion of the lessons-learned reports discussed above, the NRC staff consider the formal assessment of lessons learned from the COVID-19 pandemic completed, and staff will incorporate appropriate actions moving forward. NRC staff are still considering whether to conduct a formal evaluation to benchmark the effectiveness of NRC approaches to licensing and oversight during the COVID-19 pandemic against approaches adopted by other Federal agencies.

PRIORITY QUESTION 2: WHAT DATA RECEIVED AND MAINTAINED WOULD BE MOST BENEFICIAL FOR USE IN ADVANCED ANALYTICAL TOOLS (E.G., ARTIFICIAL INTELLIGENCE) TO SUPPORT NRC DECISION-MAKING?

SUMMARY

The NRC receives information from stakeholders in various formats through mandatory and voluntary information collections. This information is used in agency activities to support the safety and security mission. The NRC relies heavily on individual employee analysis in the review of items such as licensee submittals, licensing-basis documents, reporting requirements, and rulemaking activities. By improving how the NRC collects data and information, advanced analytical tools can be used more readily and potentially make decision-making easier, faster, and more efficient. Receiving data and information in formats that readily allow analysis through modeling or calculations allows for a more effective use of resources for both the NRC and licensees. These data improvements will also benefit members of the general public, as well as universities performing academic research in these areas.

Key Actions, Methods, and Analytic Approaches

(1) Identify agency information collections and determine how the collections as a whole support the agency's decision-making process and whether additional data are needed.

[12] Under the NRC Agreement State Program, the NRC and a State may enter into an agreement through which the NRC discontinues, and the State assumes, authority to license and regulate byproduct materials (radioisotopes), source materials (uranium and thorium), and certain quantities of special nuclear materials. Additional information can be found on the NRC public website. (https://www.nrc.gov/about-nrc/state-tribal/agreement-states.html)

(2) Conduct an analysis to determine which decision-making processes could benefit from modifying information collections for use in advanced analytical tools.

(3) Establish, through a comparative analysis, whether there is a change in burden for the information collection using an analysis-ready submittal format.

(4) Prioritize the information collections that would have the most significant impact on agency decision-making, analytical tool use, and stakeholder use.

Anticipated Data Needs and Tools

- inventory of agency activities that could benefit from improved information collections
- for each NRC information collection, the purpose of the collection, the specific data collected, the format, and the method of submittal to support the review
- current resource burden for stakeholders submitting information to the NRC and estimated resource burden for potential format and submission changes to support a comparative analysis
- benchmarking other agencies' use of electronic submission for information collections to inform the NRC's review

Anticipated Challenges

- Developing universal prioritization criteria for datasets used by different program areas may be a challenge.
- Licensees that submit data to the NRC may not see the benefit in using different or more structured formats. They may not see the benefit in openly sharing data with other stakeholders or be engaged with the NRC to provide useful feedback on implementing open data sharing. Any potential change to the format for information submittal will need to be examined and implemented consistent with all applicable laws, including the agency's backfitting regulations.

Benefits

- The identification of current agency information collections will assist in fulfilling the Evidence Act requirement of developing a comprehensive data inventory and contribute to the NRC's open data plan for datasets that can be made publicly available.

Status

- The NRC has recently created a dynamic text-based index of the documents stored in its official document management system for internal agency use. The indexing of this content makes it more readily available to the agency's data analytics community through the use of advanced analytical tools and data science techniques.
- The NRC is in the process of piloting cognitive search capabilities to expedite the discovery and retrieval of document content from the agency's official document management system and is soliciting staff feedback on these new capabilities.
- The NRC is currently investigating the level of effort required to enable the storage and sharing of structured data formats within the agency's official document management

system. Storage of structured data in its native formats would enable access to raw data (where appropriate) for internal and external stakeholders to use in advanced analytics.

- The NRC is considering which information collection mechanisms/platforms should be modified to aid in ensuring that data are formatted in a fashion that better supports analysis. This could include the expansion of existing collection mechanisms, such as the NRC's Mission Analytics Portal-External (MAP-X).[13]
- NRR is developing an implementation plan to ensure that the agency achieves the goals and actions within the Artificial Intelligence Strategic Plan.[14] The implementation plan will establish roles and responsibilities, an outline of tasks and deliverables, milestone dates, and estimates of budgetary resources. NRR expects to complete the plan by the end of FY 2023.

PRIORITY QUESTION 3: TO WHAT EXTENT ARE THE NRC'S COMPUTER CODES CAPABLE OF SUPPORTING INDEPENDENT ANALYSIS OF THE SAFETY OF ADVANCED REACTOR DESIGNS AND OPERATIONS?

SUMMARY

The NRC routinely uses scientific computer codes and analytical tools to perform confirmatory, sensitivity, and uncertainty analyses to independently analyze the safety of advanced reactor designs. These codes and tools help examine safety margins inherent in the design, commensurate with the risk and safety significance of the phenomena related to specific reactor designs.

The NRC will perform analysis and research to (1) identify the computer codes, analytical tools, information, and data for reactor-systems analysis that staff may need to analyze the safety of non-light-water reactor (non-LWR) designs, (2) assess the existing capability of computer codes, analytical tools, and supporting information, (3) identify gaps in both analytical capabilities and supporting information and data, and (4) interact with both domestic and international organizations working on non-LWR technologies to enhance collaboration and cooperation. The NRC will engage stakeholders, including the U.S. Department of Energy, the Electric Power Research Institute, national laboratories, reactor vendors, utilities, and the international community on issues related to computer codes and analytical tools, to share knowledge and collaborate on solutions.

Key Actions, Methods, and Analytic Approaches

(1) Identify near-term advanced reactor submittals to understand which systems and components will need to be modeled and assessed using computer codes and analytical tools.

(2) Identify the computer codes, analytical tools, information, and data for reactor-systems analysis that staff may need to analyze the safety of non-LWR designs.

---

13 Information on the NRC's MAP-X platform can be found at https://mapx.nrc-gateway.gov.

14 The NRC published its Artificial Intelligence Strategic Plan for FYs 2023–2027 in May 2023 (ML23132A305).

(3) Review near-term advanced reactor submittals to identify unique features and areas of interest, group and prioritize designs by technology type, and determine the computer codes and data needed to perform the safety analyses for each reactor design.

(4) Assess the existing capability of computer codes, analytical tools, and supporting information and identify gaps in analytical capabilities and data (e.g., areas of large uncertainties relative to key safety limits or the operation of novel reactor design features).

(5) Interact with both domestic and international organizations working on non-LWR technologies to identify opportunities to collaborate and cooperate in recognizing and closing gaps.

Anticipated Data Needs and Tools

- a list of near-term advanced reactor designs to support the review
- operational and experimental data used to develop advanced reactors (e.g., normal operation, transient information, basic physics data) to support the review

Anticipated Challenges

- Staff may not have access to advanced reactor design information prior to formal licensing and topical report submittals.
- Access to information, models, and data may be limited for those non-LWR designs that are less mature, with designs that are currently conceptual in nature and lack the details to allow for a full understanding of the reactor design and its operations.

Benefits

- These activities will increase the NRC's overall capacity to perform modeling and simulation.
- Through these activities, NRC staff will gain early familiarity with new reactor designs and have a better understanding of the limits of modeling and simulation in comparison to actual results.
- Establishing the agency's baseline capabilities for computer code modeling will allow the NRC to identify additional research that will increase the capabilities of the agency's computer codes and analytical tools.
- Completing these evidence-building activities will give the NRC an understanding of the extent to which its computer codes for reactor systems analysis and analytical tools can be used to evaluate the safety of non-LWR designs.

Status

- NRC research program staff have made significant progress over the past 5 years towards preparing tools and methods needed to analyze non-LWR designs and are completing a report that will document this progress.
- NRC research program staff have developed computer code models of non-LWR reference plant designs and have completed code demonstration projects to help

evaluate computer code readiness.[15] The technologies addressed within these projects reflect those associated with recent and anticipated advanced reactor licensing submittals.

- Data collected for the current (FY 2023) capacity assessment emphasized the continued importance of attention to computer codes and analytical tools related to the safety of advanced reactor designs.

PRIORITY QUESTIONS FOR STRATEGIC PLAN GOAL 2: CONTINUE TO FOSTER A HEALTHY ORGANIZATION

PRIORITY QUESTION 4: TO WHAT EXTENT ARE LICENSING ACTIONS PERFORMED BY THE NRC BECOMING MORE OR LESS RESOURCE INTENSIVE OVER TIME AND HAVE THERE BEEN ANY CHANGES IN WORK PRODUCT QUALITY?

SUMMARY

Data-driven and evidence-based license reviews are essential to ensuring the NRC is accomplishing its mission. To answer this question, the NRC will evaluate licensing actions associated with licensing programs for which the NRC has developed generic milestone schedules, as required by the Nuclear Energy Innovation and Modernization Act (NEIMA).[16] The evaluation will (1) determine whether similar licensing actions have become more or less resource-intensive over time, (2) identify resource variances between similar licensing actions, (3) identify the factors contributing to the increase, decrease, and variance of resources for each type of licensing action, and (4) determine whether the quality of the work products has changed. The NRC will engage internal and external stakeholders to conduct this assessment. This evaluation will produce a better understanding of how resources are being used for similar licensing actions and may provide key insights to further risk-inform the agency's licensing programs.

Key Actions, Methods, and Analytic Approaches

(1) Complete a process evaluation of licensing actions to determine whether resource needs have become more or less extensive over time. The evaluation will use a combination of methods that include a comparative analysis, trend analysis, quality assessment, and a needs assessment.

(2) Assess which factors contributed to the increase or decrease of resource needs for each type of licensing action.

---

15 Additional information regarding non-LWR source term demonstration projects can be found on the NRC public website at https://www.nrc.gov/reactors/new-reactors/advanced/nuclear-power-reactor-source-term.html.

16 The NRC established generic milestone schedules for different types of licensing actions for requested activities of the Commission that involve the issuance of a final safety evaluation as required by section 102(c) of NEIMA (Pub. L. No. 115-439, Title I, § 102(c), 132 Stat. 5570 (2019)). The NRC's generic milestone schedules can be found on the NRC public website at https://www.nrc.gov/about-nrc/generic-schedules.html.

(3) Conduct a quality assessment of work products associated with licensing actions.

Anticipated Data Needs and Tools

- financial information from the license application reviews to establish a baseline level of effort for license reviews
- quality assessment documentation for license application reviews
- categorized licensing actions to assess the different types of reviews to support comparative analysis
- product quality surveys completed by internal and external stakeholders to contribute to establishing the quality baseline
- prior related evaluation and audit reports by the NRC and other Government organizations

Anticipated Challenges

- Not all available data are at the level of detail or quality the NRC requires to perform an accurate evaluation.
- Earlier financial data are not necessarily in the same format as later data; data inconsistencies and formatting do not allow for ease of processing and evaluation or for comparison and analysis over longer periods of time.
- Licensing actions are heterogeneous to a degree that may inhibit comparison. For example, license applications vary in quality and completeness when initially submitted, and the designs and analytical methods addressed within applications vary in complexity and novelty. These factors impact the time and level of effort that NRC staff need to complete acceptance reviews and technical reviews.

Benefits

- Establishing baseline data points for staff and contract effort expended on license reviews for similar licensing actions will help with future workforce planning projections.
- Identifying and assessing the quality of requests for additional information from licensees can be useful in enhancing the quality of regulatory guidance.
- Developing a quality baseline with defined criteria for assessing licensing work products will help the NRC consistently measure quality in the future.

Status

- NRC staff are in the initial stages of planning an evaluation to address this question, including determining the intended scope, methods, data, and resources for the evaluation. Additional details can be found in the NRC's FY 2024 Annual Evaluation Plan.[17]

[17] ML23073A062

PRIORITY QUESTION 5: TO WHAT EXTENT ARE THE NRC'S WORKFORCE PLANNING PROCESSES ADEQUATELY ACCOMMODATING POTENTIAL WORKLOAD FLUCTUATIONS?

SUMMARY

The goal of strategic workforce planning (SWP) is to formulate strategies and action plans that enable the NRC to recruit, retain, and develop the workforce required to address emerging needs and workload fluctuations. The SWP process supports agency efforts to better forecast the amount and type of work now and in the future, and the workforce needed to perform this work. The SWP process also helps NRC staff to understand the future direction of the agency's work and empowers them to plan their professional career development.

The NRC will perform an evaluation that assesses the effectiveness and efficiency of the current SWP processes and will compare estimated workloads and staffing projections against actual results. The NRC will engage with internal stakeholders using the SWP process and benchmark against other Federal agencies.

Key Actions, Methods, and Analytic Approaches

(1) Evaluate the NRC's SWP process to assess effectiveness and efficiency, as well as identify any areas for potential improvement to maximize the agency's efforts. Conducting a formative evaluation of the NRC's SWP process will require the agency to comprehensively assess multiple aspects of the overall approach to workforce planning as implemented on an agencywide basis.

The formative evaluation will use a combination of methods that include an implementation assessment and a needs assessment. This evaluation may also include a cost-benefit analysis to determine whether the workforce planning process (a) results in dependable future workload projections and (b) is effective and efficient in light of the accuracy of the workload projections.

(2) Conduct benchmarking with other Federal agencies.

(3) Perform an analysis to determine whether the cost of conducting the SWP process is effectively balanced against the desired outcomes.

Anticipated Data Needs and Tools

- compatible data for projected and actual workloads to support the comparative analysis
- documentation of the processes used to develop the projected workloads
- prior related evaluations and assessments of workforce needs performed by the NRC and by external organizations
- data from interviews and focus groups to support the evaluation

Anticipated Challenges

- Resources expended by staff and management to support the SWP process may be aggregated and tracked with other generic administrative activities. Resources may need to be estimated based on discussions with staff and management.

Benefits

- With respect to incremental benefits, assessing the efficiency of the actual workforce planning and its comparison to projections, as well as benchmarking with other Federal agencies, will provide the NRC with insights to improve workforce planning, recruiting, and retention practices that the agency can leverage in its internal workforce planning program.

Status

- The NRC contracted with Pacific Research and Evaluation, LLC, to conduct the planned evaluation of the SWP process. The intent of this evaluation is to assess the effectiveness and efficiency of the NRC's SWP process and identify areas for potential improvement. The evaluation began in October 2022 and is expected to conclude by the end of FY 2023. Additional details can be found in the NRC's FY 2024 Annual Evaluation Plan.[18]
- Preliminary data from the NRC's ongoing evaluation of its SWP process, along with data collected for the FY 2023 NRC Capacity Assessment, suggest that better utilization of SWP data will help the NRC remain future focused and address substantial staffing gaps within the agency.

PRIORITY QUESTION 6: WHAT PROCESS IMPROVEMENTS CAN BE IMPLEMENTED TO MAKE THE NRC A MORE MODERN, RISK-INFORMED REGULATOR AND HOW ARE THEY ALIGNED WITH PERFORMANCE INDICATORS?

SUMMARY

Processes and procedures are vital to ensure consistency, clear expectations, performance measurement, and established roles and responsibilities consistent with established policy. The NRC operates with structured policies and procedures, such as management directives and office instructions. The NRC uses a performance management framework that clearly and directly links program goals with the NRC Strategic Plan and institutionalizes the use of performance information in decision-making. These processes and procedures and the NRC's performance management framework will move the agency toward being a more modern, risk-informed regulator.

Key Actions, Methods, and Analytic Approaches

(1) Identify and prioritize agency processes based on the level of potential improvement or benefit to the agency, measured by frequency of use and level of effort, while factoring in potential risks (e.g., loss of transparency, reduced stakeholder engagement).

(2) Identify agencywide process gaps that could be improved or benefit from procedure development using business analytics.

[18] ML23073A062

(3) Leverage insights from the capacity assessment and other available input to determine which processes are not working as intended or can be further improved or enhanced for effectiveness, efficiency, quality, and agility.

(4) Analyze the agency's performance indicators to determine whether—

  (a) existing indicators provide meaningful insights

  (b) existing indicators provide a hierarchical structure that allows consistent reporting

  (c) any existing indicators should be discontinued, modified, or replaced with new performance indicators that provide more meaningful results

  (d) existing agency datasets support any new indicators that may be proposed

  (e) additional data should be collected or compiled to support performance assessment needs

Anticipated Data Needs and Tools

- agency documentation to ensure that the prioritization for process improvement encompasses all agency processes and procedures
- a baseline of current process effectiveness and efficiency related to time, quality, resources, and level of staff and management effort, to use in a comparative analysis
- feedback from internal and external stakeholders on the NRC's processes and procedures to inform the evaluation
- performance indicator data, including results and their relationship to office and agency priorities, and their importance or relevance to internal and external stakeholders, to inform the evaluation
- a documented process and structure for discontinuing, modifying, or replacing performance indicators
- feedback from internal and external stakeholders on the performance indicators to support establishing a baseline

Anticipated Challenges

- Staff may be challenged to establish the baseline of current process effectiveness and efficiency in order to measure quality and level of effort.
- It may be difficult to secure subject matter expertise in performance management to perform an objective assessment of the agency's performance indicators.
- There may be resistance to discontinuing, modifying, or replacing performance indicators with indicators that provide more meaningful results.

Benefits

- Process mapping will result in a fully documented end-to-end process flow and may facilitate the identification of processes that could benefit from an automated workflow.
- Identifying and mapping processes will give a holistic view, which will allow staff to clearly identify duplication and ensure consistency between overlapping processes.

Status

- The NRC developed a new Microsoft Power Apps application to process data associated with staff telework agreements. The Telework Agreement Data Application will provide a means for collecting data on staff telework utilization in a central location and in a uniform manner that will allow for more efficient and effective processing and tracking of agency telework trends moving forward.
- Data from the FY 2023 NRC Capacity Assessment indicate that, in addition to previously identified areas for potential improvement (e.g., knowledge management and strategic workforce planning) the NRC should consider prioritizing improvements to its processes for requesting and approving external training, workload management, and hiring/onboarding to fill job vacancies.
- NRC staff are currently in the process of analyzing data obtained during the agency's second NRC Futures Jam, a crowdsourcing event held in June 2023 to obtain input from NRC staff that can help identify areas for potential process improvement and modernization.
- NRC staff are in the process of analyzing agency performance indicators. This analysis includes efforts to identify areas where existing indicators are not available or where there may be other gaps, in response to guidance recently issued by OMB.[19] Efforts to analyze and improve agency performance indicators will continue into FY 2024.

PRIORITY QUESTION 7: HOW CAN THE NRC BETTER LEVERAGE RESEARCH CONDUCTED THROUGH NRC-SPONSORED UNIVERSITY RESEARCH AND DEVELOPMENT GRANTS?

SUMMARY

The NRC's University Nuclear Leadership Program awards funding to universities for research and development (R&D) grants. The program is intended to develop a workforce capable of supporting the design, construction, operation, and regulation of nuclear facilities and the safe handling of nuclear materials.

The NRC will evaluate the University Nuclear Leadership Program to identify opportunities to leverage university grants to support NRC research needs. The evaluation will include activities such as internal and external stakeholder engagement, process reviews, and benchmarking with other Federal agencies. Ideally, the evaluation will reveal strategies for more effective use of research funding in the future.

[19] Office of Management and Budget issued Memorandum M-23-15, *Measuring, Monitoring, and Improving Organizational Health and Organizational Performance in the Context of Evolving Agency Work Environments*, issued April 13, 2023

Key Actions, Methods, and Analytic Approaches

(1) Conduct a formative evaluation to assess effectiveness and efficiency, as well as identify areas for improvement, if any, to maximize the agency's efforts. The evaluation will determine the extent to which—
   (a) NRC-funded grants support congressional program goals and requirements;
   (b) NRC-funded grant projects have aligned with agency priorities;
   (c) grant limitations, such as limited funding, affect the potential benefit of the proposed university grants;
   (d) the University Nuclear Leadership Program is achieving the intended benefits for the NRC's mission and the nuclear workforce development and research needs;
   (e) current processes for awarding funding are effective and efficient in meeting the program objectives; and
   (f) improvements to the program can be made to better leverage the NRC-sponsored research and development grants.

(2) Conduct an analysis of the University Nuclear Leadership Program's effect on universities and the nuclear industry.

Anticipated Data Needs and Tools

- qualitative and quantitative data associated with effects on universities and the nuclear industry (e.g., job creation, academic interest) as a result of the University Nuclear Leadership Program
- benchmarking information from other Federal agencies on their grant programs, award criteria, and agency benefits, to support a comparative analysis

Anticipated Challenges

Because the R&D grant program is relatively new, sufficient data may not be readily available.

Benefits

- Sharing and publicizing the NRC-funded R&D grants will allow NRC stakeholders to leverage the outcomes of the research projects.
- Determining whether the NRC's grant program is achieving its workforce development objectives will help the agency make continuation or modification decisions.
- Benchmarking University Nuclear Leadership Program grant practices with those of other Federal agencies will provide the NRC with insights on whether it needs to modify its grant programs.

Status

- NRC staff are currently in the initial stages of planning an evaluation to address this priority question. Once initial planning is complete, the NRC will work with an evaluation

contractor to initiate and carry out the evaluation. Additional details can be found in the NRC's FY 2024 Annual Evaluation Plan.[20]

- Once the program evaluation is completed, the NRC will leverage insights from the evaluation and other analysis, if needed, to assess the program's overall effect on universities and the nuclear industry.

PRIORITY QUESTIONS FOR STRATEGIC PLAN GOAL 3: INSPIRE STAKEHOLDER CONFIDENCE IN THE NRC

PRIORITY QUESTION 8: HOW CAN THE NRC IMPROVE EXTERNAL ENGAGEMENT TO INSPIRE STAKEHOLDER CONFIDENCE?

SUMMARY

The NRC takes an active role in the Open Government Initiative by ensuring that the public is informed about and has a reasonable opportunity to meaningfully participate in the NRC's regulatory processes. In addition to the wider public, the NRC also considers the needs and interests of a variety of external stakeholder groups (e.g., nongovernmental organizations, interest groups, legislative bodies, international counterparts, and NRC licensees). In considering the interests of its stakeholders, the NRC must take into account a variety of differing viewpoints. In conducting business, NRC staff share a commitment to the NRC's important public health and safety, defense and security, and environmental protection mission. NRC staff seek to inspire confidence among external stakeholders through the effective and efficient conduct of operations to support this mission and by upholding the NRC Principles of Good Regulation.[21]

The NRC will assess the agency's current practices for external engagement to determine the effectiveness of these methods and to establish a baseline for stakeholder confidence. The assessment will include reviewing readily available information, such as results of the Federal Employee Viewpoint Survey and Safety Culture and Climate Survey, public comments on rulemakings and policy statements, participation in public meetings, engagement in social media platforms, and inquiries received through the NRC public webpage. The NRC will conduct an analysis that accounts for equity, diversity, and inclusion; identifies areas for improvement; and develops recommendations to inspire stakeholder confidence in areas where it may be lacking.

Key Actions, Methods, and Analytic Approaches

(1) Identify and assess the current methods of communication with stakeholders in terms of frequency, type of communication, and level of stakeholder engagement in the communication.

---

20 ML23073A062

21 Information about the Principles of Good Regulation can be found on the NRC's public website (https://www.nrc.gov/about-nrc/values.html#principles).

(2) Research engagement practices in industry and government that are associated with high stakeholder confidence and conduct a comparative analysis with NRC engagement practices.

(3) Identify and assess communications with stakeholders, including NRC documents released to the public and information shared on the NRC public webpage.

(4) Conduct benchmarking with other Federal agencies on their engagement with stakeholders.

(5) Survey NRC stakeholders to determine a baseline for stakeholder confidence in the agency's current methods of engaging with the public.

(6) Leverage insights to identify potential changes or practices that can be implemented to better inspire confidence among external stakeholders.

Anticipated Data Needs and Tools

- documentation and data associated with previous surveys that measured openness to support the review and contribute to establishing a baseline for stakeholder confidence in the NRC's commitment to public engagement and methods for engaging with the public
- information on public meetings, both in person and virtual, including the number of attendees, grouped by topic area, to support the review
- a sample set of written and verbal communications, including social media communications, for benchmarking
- statistics from visitors to the NRC public website and social media platforms, such as site visitors, searches, and followers
- results of existing surveys related to public confidence in Federal agencies (and the basis for such results), to support the review and benchmarking analysis

Anticipated Challenges

- Staff may be challenged by difficulty in identifying the appropriate groups of stakeholders to survey and by the need to develop multiple surveys for different groups.

Benefits

- As an incremental benefit, staff can gain insights into the perspectives of different groups of stakeholders at different locations and identify key reasons for the lack of confidence of each location's stakeholders in the NRC's commitment to public engagement and methods for engaging with the public. This information can be used to improve engagement and practices for future communications with each stakeholder group.

Status

- The NRC has contracted with Pacific Research and Evaluation, LLC, to conduct a literature review of studies analyzing stakeholder engagement and stakeholder confidence. The goal of this review is to identify principles and practices that the NRC should implement to improve stakeholder engagement and further inspire stakeholder

confidence. This literature review was initiated in summer 2023 and is expected to conclude in early FY 2024.

- Leveraging insights regarding principles and practices for stakeholder engagement obtained during its literature review (discussed above), the NRC will continue to review its communication and stakeholder engagement practices, including benchmarking against other Federal agencies. These efforts will continue into FY 2024.

PRIORITY QUESTION 9: TO WHAT EXTENT ARE THE NRC'S PROGRAMS, POLICIES, AND ACTIVITIES ADDRESSING ENVIRONMENTAL JUSTICE?

SUMMARY

Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," dated February 11, 1994, states that Federal agencies "shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations…." Independent agencies, such as the NRC, are not bound by the terms of the EO but, as stated in the order, are requested to comply with its provisions. The Commission has committed to the general goals of the EO. In its "Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions" (69 FR 52040; August 24, 2004), the Commission stated that the NRC will consider and integrate environmental justice matters as part of its National Environmental Policy Act review process.

The NRC will systematically review how the agency's programs, policies, and activities address environmental justice. As part of its review, staff will evaluate recent EOs and assess whether environmental justice is appropriately considered and addressed in the agency's programs, policies, and activities, such as adjudicatory procedures and environmental reviews, given the agency's mission. Staff will benchmark practices of other Federal, State, and Tribal agencies and assess whether the NRC should incorporate environmental justice beyond implementation through the National Environmental Policy Act. In addition, staff will review the adequacy of the 2004 "Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions." Staff will also consider whether establishing formal mechanisms to gather external stakeholder input would benefit any future environmental justice efforts. Staff will engage with internal and external stakeholders representing a broad range of perspectives to solicit their views, and staff will leverage institutional knowledge and transformation initiatives to inform the review.

Key Actions, Methods, and Analytic Approaches

(1) Assess how agency programs, policies, and activities address environmental justice and compare them to EOs or other executive branch activities that discuss environmental justice, as appropriate.

(2) Benchmark NRC environmental justice activities against the environmental justice activities of other Government agencies.

(3) Analyze the legal or other limits of applying environmental justice concepts to additional aspects of the agency's programs, policies, and activities.

(4) Identify potential formal mechanisms to gather input from external stakeholders and determine whether these formal mechanism(s) could be improved through any future NRC environmental justice efforts.

Anticipated Data Needs and Tools

- compilation of environmental justice benchmarking information to help draw comparisons and distinctions
- documentation of interagency coordination efforts and compilation of existing guidance to agencies for implementing environmental justice programs
- development of a resource comparing and outlining goals of EOs that address environmental justice (e.g., EO 14008, "Tackling the Climate Crisis at Home and Abroad," dated January 27, 2021) against which to assess agency programs, policies, and activities, as appropriate
- compilation of examples of formal environmental justice mechanism(s) from Federal, State, and Tribal agencies
- collection and compilation of the views of, and information from, stakeholders and other interested persons

Anticipated Challenges

- determining the appropriate depth and breadth of agency programs, policies, and activities to review
- consistently determining and quantifying potential benefits and impacts (concrete quantitative information will likely be difficult to find)
- dispositioning or reconciling conflicting feedback from stakeholders and other interested persons

Benefits

- Carrying out the activities above and developing a better understanding of considerations for the social-economic demographics around NRC-licensed facilities will allow the agency to better engage minority and low-income communities.

Status

- NRC staff have completed a systematic review of how the NRC approaches environmental justice in its programs, policies, and activities. From this review, NRC staff outlined several commitments and put forth several recommendations for developments moving forward, which were provided to the Commission via SECY-22-0025.[22]
- With the completion of the systematic review, the NRC staff consider this priority question to be closed. Moving forward, the NRC may take additional action, as deemed appropriate, in accordance with the Commission's decision on the provided recommendations.

[22] The NRC's Environmental Justice Assessment can be found on the NRC's public website (https://www.nrc.gov/about-nrc/regulatory/licensing/nepa/environmental-justice/assessment.html).

NRC FORM 335
(12-2010)
NRCMD 3.7

U.S. NUCLEAR REGULATORY COMMISSION

BIBLIOGRAPHIC DATA SHEET

(See instructions on the reverse)

1. REPORT NUMBER
(Assigned by NRC, Add Vol., Supp., Rev., and Addendum Numbers, if any.)

NUREG-2252, Vol. 2

2. TITLE AND SUBTITLE

Evidence Building Plan
Fiscal Year 2023

3. DATE REPORT PUBLISHED

MONTH	YEAR
September	2023

4. FIN OR GRANT NUMBER

N/A

5. AUTHOR(S)

Justin Vazquez, Raeann Shane

6. TYPE OF REPORT

Technical

7. PERIOD COVERED (Inclusive Dates)

Annual

8. PERFORMING ORGANIZATION - NAME AND ADDRESS (If NRC, provide Division, Office or Region, U. S. Nuclear Regulatory Commission, and mailing address; if contractor, provide name and mailing address.)

Office of the Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

9. SPONSORING ORGANIZATION - NAME AND ADDRESS (If NRC, type "Same as above", if contractor, provide NRC Division, Office or Region, U. S. Nuclear Regulatory Commission, and mailing address.)

Office of the Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

10. SUPPLEMENTARY NOTES

11. ABSTRACT

The U.S. Nuclear Regulatory Commission (NRC or the agency) is an independent agency established by the Energy Reorganization Act of 1974, which began operations in 1975 as a successor to the Atomic Energy Commission. The NRC is required by the Foundations for Evidence-Based Policymaking Act of 2018 to develop an agency evidence-building plan. An evidence-building plan is a systematic approach for identifying and addressing priority questions relevant to the agency's programs, policies, and regulations. More broadly, it is a coordination tool to engage stakeholders in evidence planning and building to help achieve an agency's mission. The evidence building plan is intended to emphasize and foster an agency culture of learning and continuous improvement. Once an evidence-building plan is implemented, decision makers can use the resulting evidence to guide choices to improve the agency programs, policies, and regulations. The evidence building plan includes nine priority questions to support agency needs and fiscal year (FY) 2022–2026 strategic goals and objectives. This FY 2023 update provides information regarding developments since the initial publication of the plan in FY 2022, including the status of the NRC's actions established to address each of the priority questions.

12. KEY WORDS/DESCRIPTORS (List words or phrases that will assist researchers in locating the report.)

Evidence, Evidence-Based, Policymaking, Foundations for Evidence-Based Policymaking Act of 2018, Evidence Act, evidence, evidence-building plan, learning agenda, strategic plan, strategic planning, evidence-building, priority questions, decisionmakers, continuous improvement, improvement

13. AVAILABILITY STATEMENT

unlimited

14. SECURITY CLASSIFICATION

(This Page)
unclassified

(This Report)
unclassified

15. NUMBER OF PAGES

16. PRICE

U.S. Nuclear Regulatory Commission
NUREG-2252, Vol. 2

September 2023

www.nrc.gov

STAY CONNECTED

@NRCgov