

FY 2024

(April 1, 2024 ~ March 31, 2025)

Annual Report

**Nuclear Regulation Authority
Japan**

The Nuclear Regulation Authority reports the state of affairs under its jurisdiction to the Diet based on the provisions of Article 24 of the Act for Establishment of the Nuclear Regulation Authority (Act No. 47 of 2012).

Major Activities in Fiscal Year 2024

(1) Change of NRA Commissioners and Setting of Third Medium-Term Goals

On September 18, 2024, Satoru Tanaka and Akira Ishiwatari stepped down as Nuclear Regulation Authority (NRA) Commissioners after having served for two terms totaling 10 years from September 2014. On the following day (September 19), Shinya Nagasaki and Koshun Yamaoka assumed their positions as NRA Commissioners.

As the final year of the second medium-term goals, which underpins the NRA operational management, has arrived, the NRA set the third medium-term goals for five years from FY 2025 which presents the Outcome Goals to be achieved and Implementation Goals to be implemented to achieve those goals, on February 5, 2025.

(for details, see Section 1 and 2 of Chapter 1)

(2) Disposition for application for permission for change of reactor installation of Unit 2 of Japan Atomic Power Tsuruga NPS

Concerning the application for permission for change of reactor installation for Unit 2 of Japan Atomic Power Tsuruga NPS, Japan Atomic Power Co. made a revision application for the part describing the activity of K-fault identified at the on-site D-1 trench and the continuity with fracture zones that pass directly under the reactor buildings on August 31, 2023.

After that, the NRA reviews it with eight review meetings and two on-site investigations were conducted by the review team including NRA Commissioner Ishiwatari. Then, on July 26, 2024, the review team for examining conformity to the new regulatory requirements judged that the Tsuruga NPS failed to conform to the design permission standard rules.

The NRA, after exchanging opinions with the management layer of Japan Atomic Power and confirming the response policy concerning conformity to the new regulatory requirements, determined to summarize a draft of the review result saying that the Tsuruga NPS was not confirmed as conforming to the design permission standard rules due to the fact that K-fault could not be denied to have been active since the Late Pleistocene Era (about 120,000 to 130,000 years ago or later) and that continuity with fracture zones that pass directly under the reactor buildings of Units 2 could not be denied. After that, taking into consideration the solicited scientific and technological opinions on the review report draft, the NRA made a disposition not to permit the above application on November 13, 2024.

(For details, see Section 1 of Chapter 2.)

(3) Implementation of Safety Regulations, etc. Concerning Aged Power Reactor Facilities

Toward full-scale enforcement of the Long-Term Facility Management Plan Approval System on June 6, 2025, the NRA has developed an operation system by establishing a Division of Long Term Operation of Nuclear Power Plants in the NRA Secretariat and determined to revise relevant regulations and others on January 22, 2025, completing the development of the system necessary for operating the system.

Procedures to prepare for a smooth transition to the long-term facility management plan approval system have been implemented since October 1, 2023. Until the full implementation of this system, the review of conventional applications for approval of extension of the operational period continues, the NRA is reviewing the application for approval of the long-term facility management plan toward shifting to the new system. In FY 2024, concerning conventional applications for extension of the operation period and others, the NRA approved those for Units 3 and 4 of Takahama PS of Kansai Electric Power Co., Inc. In addition, concerning the application for approving the long-term facility management plan by the new system, the NRA approved 11 applications including an application for approval of a long-term facility management plan on June 26, 2024 that sets the end date as 40-years from the operational start of Units 3 and 4 of Ohi NPS of Kansai Electric Power Company.

(for details, see Section 2 and 4 of Chapter 1)

(4) Acceptance of the International Physical Protection Advisory Service (IPPAS) mission

The NRA accepted the International Physical Protection Advisory Service (IPPAS) mission by IAEA in the period from July 22 to August 2 of 2024.

As a result of this mission, the mission team consisting of experts from various countries concluded that the Japan's nuclear security system was strong, and on November 28, 2024, the NRA received recommendations and advice that contribute to further strengthening Japan's nuclear security system and IPPAS Mission Report presenting good practices that contribute to the continuous improvement of the international nuclear security and serve as references for other IAEA member states.

(for details, see Section 1 of Chapter 3)

(5) Discussion of operation of sheltering in place in the event of nuclear emergency.

Following the opinion exchange meeting held with local governments in the Onagawa region on January 13, 2024, nine meetings were convened of the “study team

on the implementation of sheltering in place in the event of a nuclear emergency” established on March 27, 2024 for the purpose of discussing the most effective implementation of sheltering.

On October 31, 2024, upon receipt of a report on the interim summary of the status of discussions by the study team, the NRA confirmed the contents of the report.

Then, in the eighth meeting of the study team held on February 5, 2025, a report draft and a Q&A draft concerning implementation of sheltering in place were presented. Furthermore, in the ninth meeting held on March 28, 2025, also in consideration of the result of opinions from relevant local governments, the NRA summarized a report showing ideas on implementing sheltering including its scope, timing to judge continuation, and matters to consider in judgment of cancellation of sheltering and switching to evacuation.

Afterwards, at the 1st FY 2025 NRA meeting (April 2, 2025), the NRA, having received the report, determined to revise the Guideline for Nuclear Emergency Preparedness and Response and further strengthen coordination with the relevant ministries and agencies concerning response to complex disasters.

(for details, see Section 3 of Chapter 5)

- All data for FY 2024 in the report indicates figures up to March 31, 2025 unless otherwise specified for individual ones.
- The legal personality such as “Corporation” or “National Research and Development Agency” is partially omitted.
- The following terms are partially abbreviated throughout this report.

Abbreviations used in the text, etc	Official name and definition
Nuclear Reactor Regulation Act	Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (Act No. 166 of June 10, 1957)
Radioisotope Regulation Act	Act on the Regulation of Radioisotopes, etc. (Act No. 167 of June 10, 1957)
Nuclear Emergency Act	Act on Special Measures Concerning Nuclear Emergency Preparedness (Act No. 156 of December 17, 1999)
Incident under obligation to report	In Chapter 2 and Chapter 4, events that nuclear operators and other entities are required to report to the NRA under Article 62-3 of the Reactor Regulation Act. In Chapter 5, events that are required to report to the NRA by the regulated parties in accordance with Article 31-2 of the Radioisotope Regulation Act.
TEPCO	Tokyo Electric Power Company Holdings, Inc.
JAEA	Japan Atomic Energy Agency
IAEA	International Atomic Energy Agency
ERC	Emergency Response Center

TABLE OF CONTENTS

Chapter 1 Maintenance of independence, neutrality, and transparency and enhancement of organizational systems	1
Section 1. Operations that Embody the NRA's Core Values and Principles.....	4
1. Change of NRA Commissioners.....	4
2. Efforts for Ensuring Independence, Impartiality and Transparency of Nuclear Regulatory Administration.....	4
3. Enhancing External Communication.....	6
4. Fostering and Maintaining a Nuclear Safety Culture and a Nuclear Security Culture	8
5. Allegation Process Regarding Safety Information on Nuclear Facility.....	9
Section 2. Enhancement of Infrastructure to Support Regulatory Operations	10
1. Continuous Improvement of Management System.....	10
2. Cooperation with International Organizations and Contribution to the International Community	12
3. Responses to Legal Affairs	17
4. Appropriate Management and Disclosure of Official Documents.....	20
5. Effective and Efficient Budget Execution	21
6. Constructing a Workplace Environment where Each Employee can Feel Fulfilled in their Work	22
7. Evaluation of Performances Regarding Operations by National Research Institutes	24
Section 3. Securing and Developing Personnel Resources.....	25
1. Ensuring High Sense of Ethics	25
2. Securing Human Resources for Nuclear Regulation	26
3. Developing Human Resources for Nuclear Regulation.....	28
Chapter 2 Strictly and properly implementing nuclear regulations and enhancing the technological foundations	31
Section 1. Implementation of Review based on the Reactor Regulation Act.....	36
1. Status of Reviews, etc. for Commercial Power Reactors	36
2. Status of Review on Type Certification, etc. of Specified Equipment Design related to Nuclear Power Reactor Facilities	46
3. Status of Reviews of Nuclear Fuel Cycle Facilities, etc	46
4. Actions related to Decommissioning.....	51
Section 2. Implementation of inspections based on the Reactor Regulation Act	55

1.	Implementation of Nuclear Regulatory Inspections of Commercial Power Reactors and Nuclear Fuel Cycle Facilities, etc.	55
2.	Confirmation of Causes and Preventive Measures for Problems in Nuclear Facilities	58
3.	Continuous Improvement of Nuclear Regulatory Inspection	61
Section 3. Promotion of Safety Research and Continuous Improvement of Regulatory Requirements		62
1.	Proactive Study on Safety.....	62
2.	Accumulation of the Latest Scientific and Technical Knowledge and Findings	66
3.	Continuous Improvement of Regulatory Requirements	67
Section 4. Continuous Improvement of Regulatory Activities and Response to New Regulatory Needs.....		73
1.	Efforts to Improve the Review Process	73
2.	Reinforcement of Efforts at the Interface for Nuclear Safety, Nuclear Security and Safeguards	74
3.	Safety Regulations of Ageing Power Reactors	76
4.	Exchange of opinions on rebuilt reactor	77
5.	Review of operation of safety improvement evaluation system	78
6.	Responses Concerning Clearance Centralized Treatment Operation in Fukui Prefecture	79
7.	Intensive Management of Radioactive Materials including Nuclear Fuel Materials without Actual Use State	79
8.	Exchange of opinions concerning the scope of application of the Reactor Regulation Act to hydrogen manufacturing facility of HTTR of JAEA	80
Chapter 3 Promoting nuclear security measures and steadily implementing protective measures		81
Section 1. Promotion of Nuclear Security Measures		83
1.	Rigorous and Proper Implementation of Regulations on Nuclear Security.....	83
2.	Response to Nuclear Security Challenge.....	86
3.	Participation in International Conference	87
Section 2. Steady Implementation of Safeguards		88
1.	Steady Implementation of Safeguard Activities in Japan	88
2.	Safeguards at TEPCO's Fukushima Daiichi NPS.....	94
3.	Status of Efforts toward Completion of Construction Rokkasho Reprocessing Plant and MOX Fuel Fabrication Plants of Japan Nuclear Fuel Limited.....	94
4.	International Contribution Concerning Safeguards	96
5.	Guidance and Supervision of Designated Information Processing Organization and Designated	

Organization Implementing Safeguard Inspections, etc. Under the Reactor Regulation Act 96

Chapter 4 Ensuring safety in decommissioning of the Tokyo Electric Power Fukushima Daiichi Nuclear Power Plant and making the causes of the accident clear.....98

Section 1. Oversight of Efforts to Decommission Reactor 101

1. Approval, Inspection, etc. of the Implementation Plan Pertaining to the Fukushima Daiichi NPS 101
2. Revision of Mid-term Risk Reduction Target Map for TEPCO's Fukushima Daiichi Nuclear Power Station and Overseeing of Reduction Efforts 102
3. Identification of Causes of Violation of Implementation Plan at TEPCO's Fukushima Daiichi NPS, Confirmation of Measures to Prevent Their Recurrence, and others..... 107

Section 2. Analysis of the Accident..... 111

1. Continuous Analysis of the Accident..... 111
2. Efforts to Disseminate Information About Analysis of TEPCO's Fukushima Daiichi NPS Accident..... 113

Section 3. Conducting Radiation Monitoring 113

1. Implementation of Radiation Monitoring of Land and Sea Areas in Response to TEPCO's Fukushima Daiichi NPS Accident 113

Chapter 5 Appropriately implementing radiation protection measures and emergency responses 117

Section 1. Promotion of Radiation Protection Measures 121

1. Investigation and Deliberation by the Radiation Council..... 121

Section 2. Implementation and Continuous Improvement of Regulations Under the Radioisotope Regulation Act 121

1. Rigorous and Proper Implementation of the Radioisotope Regulation Act..... 121
2. Continuous Improvement of Regulation pertaining to the Radioisotope Regulation Act..... 128

Section 3. Continuous Improvement of the NRA Guide for Emergency Preparedness and Response 129

1. Revision of the NRA Guide for Emergency Preparedness and Response 129

Section 4. Establishment and Operation of Crisis Management System..... 131

1. Strengthening Emergency Response Capabilities..... 131
2. Strengthening Disaster Preparedness for Nuclear Operators..... 133
3. Improvement of Communication Network Infrastructure and System..... 139

Section 5. Conducting Radiation Monitoring 140

- 1. Development and strengthening the Emergency Monitoring System..... 140
- 2. Measuring Radiation and Other Environmental Factors Nationwide 141
- 3. The Strengthening of Environmental Radiation Measurement and Emergency Monitoring Capabilities in Ports Visited by Nuclear Warships 142
- 4. Consideration of Technical Matters Related to Monitoring..... 142

Chapter 1 Maintenance of independence, neutrality, and transparency and enhancement of organizational systems

○Summary of Chapter 1

(Nuclear Regulatory Activities that Embody the NRA's Core Values and Principles)

Based on the NRA's Core Values and Principles, the NRA has continued to strive to ensure transparency, including thorough public discussions, and has made its decisions in an impartial, neutral and independent manner from scientific and technological perspectives. In FY 2024, the NRA held 71 Commission meetings, and made decisions based on scientific and technological perspectives. Furthermore, the NRA strove to enhance various communications with local residents, regulated parties, and others by giving detailed explanations on review and inspection status and other issues to local governments and local residents, exchanging opinions with chief executive officers (CEOs) of nuclear operators four times in total and with chief nuclear officers (CNOs) three times in total, having NRA Chairman and NRA Commissioners conduct on-site visits and exchange opinions with local parties (Shimane Prefecture, Ehime Prefecture), and giving lectures and exchanging opinions at the National Institute of Technology, Fukushima College, a nuclear regulation human resource developer, and issued two “NRA Information Notices.”

In terms of public relations, the NRA provided photographs and videos showing scenes of on-site investigations, on-site inspections, etc. by the NRA Chairman, NRA Commissioners, and others to the news media, and performed real-time distribution of interviews with the NRA Chairman and others following the conclusion of on-site investigations on social media. Furthermore, to allow website users to browse materials more easily, the NRA posted a link to “NRA Archive Search System N-ADRES” (hereinafter “N-ADRES”) on its website to provide coordination between the website and N-ADRES.

(Enhancement of Infrastructure to Support Regulatory Operations)

As year FY 2024 is the final year of the NRA’s second Medium-term Goal period, in consideration of the status of efforts and other conditions in this period, the NRA proceeded with discussions and determined the NRA’s third Medium-term Goals (from April 2025 to March 2030). Concerning the FY 2024 Annual Operational Plan, the NRA also positively implemented operations while reviewing the plan by taking into consideration the interim assessment of the progress of the plan, and made efforts to continuously improve operations by appropriately operating its management system based on the Nuclear Regulation Authority Management Rules including internal audit of six departments within the NRA Secretariat and other organizations, implementation of management and non-conformances and area for improvement including 12 newly reported matters (and one matter being processed).

The NRA continuously conducted a questionnaire survey and interview with staff related to the safety culture and management system also in FY 2024. In addition, the NRA led to improvements in activities to foster and maintain a culture of safety and management within the organization based on the results of the investigation in the previous year, and conducted analysis for each section and provided feedback on the results to contribute to section-based improvement activities.

In terms of the international relationship, in FY 2024 as well, in addition to participation in bilateral meetings and multinational framework meetings including INRA Meetings and WENRA, the NRA received the IAEA's review on discharging of ALPS-treated water into the sea at TEPCO's Fukushima Daiichi NPS and made other activities to disseminate information to the international community.

(Securing and Developing Personnel Resources)

In FY 2024, the NRA employed 36 newly recruited staff members and 39 staff members with work experience. The NRA offered 42 positions (including 29 newly recruited staff members and 13 staff members with work experience) for the employment in FY 2025.

Universities, colleges of technology and other institutions implemented a total of 20 nuclear regulatory human resource development programs aimed at securing and fostering human resources who will be involved in nuclear regulatory activities in the future.

For the purpose of improving and exercising the capabilities of NRA staff, staff competence was managed by continuously granting job qualifications in 5 fields, which was reflected in the assignment and treatment of staff. The NRA also expanded and strengthened the career consulting system so that the staff in charge of consultation can give careful attention to the career path of each staff member with an image of the career path in mind.

Furthermore, to develop staff to engage in research, the NRA engaged a total of 48 research staff members in joint research and dispatched one of the research staff members to JAEA to be exclusively engaged in testing and research conducted by JAEA.

Section 1. Operations that Embody the NRA's Core Values and Principles

1. Change of NRA Commissioners

On September 18, 2024, Satoru Tanaka and Akira Ishiwatari stepped down as NRA Commissioners after having served from September 19, 2014, and on the following day (September 19), Shinya Nagasaki and Koshun Yamaoka assumed their position as NRA Commissioners. In the 33rd FY 2024 NRA Commission Meeting (September 19, 2024), commissioner Nobuhiko Ban was appointed as deputy to the Chairman, and the order of succession for other commissioners to act as chairman was designated, and it was confirmed that commissioners Nagasaki and Yamaoka would succeed the operations of commissioners Tanaka and Ishiwatari, respectively.

2. Efforts for Ensuring Independence, Impartiality and Transparency of Nuclear Regulatory Administration

(1) Ensuring Independence

Independent decision-making in nuclear regulation is vital for proper regulation and is also emphasized by many foreign nuclear regulatory organizations as one of the most significant factors of the NRA's Core Values and Principles. The NRA was established as a highly independent Article 3 Authority. In its Core Values and Principles, the principle of its activities is to “make decisions independently, based on the latest scientific and technological perspective, free from any outside pressure or bias.” Under these principles, while attempting to ensure transparency by thoroughly implementing public discussions and so on, the NRA is continuing to make decisions in an impartial, neutral and independent manner from scientific and technological perspectives. Independence of nuclear regulatory administration was ensured through thorough discussion and decision making from the scientific and technological perspective at 71 NRA Commission Meetings (on a total of 225 subjects) throughout the year in FY 2024.

(2) Ensuring Impartiality

The NRA prohibits the Chairman and Commissioners from receiving donations from nuclear operators during their term of office. The NRA also discloses information about any donations they have received in the 3 years prior to assuming office and the status of employment of their students with nuclear operators. Information on the five serving members as of the end of March of 2025 is also disclosed on the NRA website.

In addition, when the NRA takes advice on the operation of the Reactor Regulation Act from external experts, the NRA shall ensure the disclosure of information on the relationship between such external experts and electric operators, etc., to ensure transparency and impartiality. Furthermore, when appointing external experts as

constituent members of committee, etc. on cases related to individual facilities of electric operators, etc., the NRA requires the external experts to confirm that they have not served as executives of the relevant electric operators in the previous three years, that they have not personally received 500,000 yen or more as remuneration during one fiscal year from relevant electric operators and that they have not been involved in earlier reviews of said facilities. Similar efforts are being made for the appointment of members of the Reactor Safety Examination Committee (hereinafter "RSEC"), the Nuclear Fuel Safety Examination Committee (hereinafter "NFSEC") and the Radiation Council.

In FY 2024 as well, based on self-reports from external experts belonging to various study groups, the stipulated information was posted on the NRA's website and made publicly available.

(3) Ensuring Transparency

Based on the "Policy on Ensuring Operational Transparency of the NRA"(adopted by the NRA on September 19, 2012), the NRA has a fundamental policy of disclosing information without requiring disclosure requests, conducting thorough public discussions, and ensuring document- based administration, thereby holding meetings of the NRA, councils, review sessions, and study teams in public, as well as making the minutes and documents of these meetings available to the public and disseminating them in real time via Internet video streaming site¹.

Concerning meetings on regulation in which three or more commissioners participate, meeting minutes summaries are prepared and then disclosed. The NRA also stipulated that concerning interviews of regulated parties and others by the NRA Chairman, Commissioners, or the NRA Secretariat staff, meeting minutes summaries are prepared and then disclosed along with used materials. Summaries of meetings/interviews on important issues are reported to the commission. Furthermore, interviews for review meetings have been continuously disclosed after having been automatically transcribed since April 2019, and automatically-transcribed minutes are posted on the "NRA Archive Search System N-ADRES" (hereinafter "N-ADRES").

In FY 2024 as well, the NRA steadily made these efforts for ensuring the transparency, posted the link to N-ADRES on its website and provided coordination between the website and N-ADRES to improve accessibility for website users to materials. Furthermore to enhance convenience for viewers of Internet video streaming site, meeting materials were posted on N-ADRES so that they can be acquired

¹YouTube and "Niconico Channel"

simultaneously with the start of a meeting. Also, a regular press conferences by the NRA Chairman (hereinafter "Chairman's Press Conference") is held once a week in principle. A regular briefing by the spokesperson of the NRA Secretariat is held twice a week. The minutes were posted on N-ADRES. When the NRA Chairman and Commissioners conducted on-site investigations and on-site inspections, the NRA provided post-investigation interviews with the Chairman and others, as well as photographs and other media, coverage (23 interviews conducted in FY 2024).

3. Enhancing External Communication

(1) Enhancing Efforts on Diverse Communication

Based on the "Policy on Commissioners' Visits of Nuclear Facilities and Exchanges of Opinions with Local Parties" that was approved at the 49th FY 2017 NRA Commission Meeting on November 15, 2017, NRA Commissioners visit nuclear facilities and exchange opinions with local parties.

In FY 2024, the NRA held on-site commissioner visits and exchanges of opinions with local parties at two sites. Specifically, on July 20, 2024, NRA Chairman Yamanaka and NRA Commissioner Ban visited Shimane Prefecture. They conducted on-site visits of the emergency response center and other facilities for severe accident management of the Shimane NPS of Chugoku Electric Power Co., Inc. and exchanges of opinions with the local parties including Governor of Shimane Prefecture, Governor of Tottori Prefecture, and Mayor of Matsue City in the Shimane Prefecture Off-site Center. Additionally, on January 24, 2025, NRA Commissioners Ban and Nagasaki visited Ehime Prefecture. They inspected the dry storage facility and other sites of Ikata PS of Shikoku Electric Power Co., Inc. and had exchanges of opinions with the local parties including the Governor of Ehime Prefecture and Mayor of Ikata Town at the Ehime Prefecture Off-site Center. In this opinion exchange meeting, NRA Chairman Yamanaka also participated by using an online conference system.

The NRA provides explanations of its regulatory activities in response to requests from local governments. In FY 2024, the NRA gave explanations on the result of the licensing review of conformity to the new regulatory requirements of TEPCO's Kashiwazaki-Kariwa NPS and licensing review of conformity to the new regulatory requirements of used fuel storage facility of Recyclable-Fuel Storage Co. to local governments and residents. The NRA also gave explanations on the review result of Shimane NPS Unit 2 of Chugoku Electric Power Company (approval of change in operational safety program concerning new regulatory requirements), review result of Units 3 and 4 of Ohi NPS of Kansai Electric Power Co., Inc. (approval of long-term facility management plan, etc.), review result of Unit 1 of Takahama PS of Kansai

Electric Power Co., Inc. (approval of change in operational safety program concerning technical evaluation of aging management), review result of Unit 3 of Ikata PS of Shikoku Electric Power Co., Inc. (approval of change in operational safety program concerning technical evaluation of aging management), review result of Unit 2 of Japan Atomic Power Tsuruga NPP (disposition not to permit the change of reactor installation), and others to local governments.

On January 17, 2025, NRA Chairman Yamanaka visited the National Institute of Technology, Fukushima College as part of nuclear regulation human resource development, gave a lecture on the status of the decommissioning of TEPCO's Fukushima Daiichi NPS, and exchanged opinions with students.

With regard to the regulated parties, the NRA held four meetings to exchange opinions with Chief Executive Officers (CEOs) of four operators on the subject of mutual understanding between the management levels of both parties regarding the licensing review of conformity to the new regulatory requirements. Also, the NRA had three meetings with Chief Nuclear Officers (CNOs) of major nuclear power facility establishers to exchange opinions about efforts to improve safety for the purpose of enhancing and clarifying regulatory requirements and reviews to ensure the smooth introduction of regulations and increase predictability. Based on these opinion exchanges, the NRA had practical opinion exchanges on the design of rebuilt reactor with operators and made efforts including improvement of the review process. In addition, the NRA Secretariat issued two "NRA Information Notices (NINs) for Regulated Parties" in FY 2024 in order to disseminate the regulatory authority's awareness of the issues.

The NRA is striving to enhance communication through these activities.

(2) Continuous Improvement for the Public Information Management System

The NRA started archiving and disclosure of important information that had been disclosed on the NRA website via the new system built in FY 2023 called N-ADRES. Concerning the materials to be registered to N-ADRES, the NRA added metadata and revised functions to further improve the convenience.

(3) Reinforcing the Transmission of Information on NRA Initiatives

In light of the public interest in nuclear regulation, the NRA strived to disseminate information to the public in a timely and detailed manner. The NRA continued efforts to distribute through social networking services (SNS) summaries of discussions at the NRA Commission Meetings that are considered to be of high public interest, incidents reported based on the Act, the impact of earthquakes on nuclear facilities, and other

information that needs to be immediately disseminated. In addition, the NRA posted a summary of the results of each NRA agenda item on the NRA website.

In particular, for matters with high public concern, such as on-site investigation by NRA Commissioner Ishiwatari in the Okunoto region and other areas conducted for collection of information on the Noto Earthquake in 2024, the NRA provided video and images of the on-site investigation to the news media, and strengthened dispatch of information by using social media as well. Furthermore, the NRA continuously made efforts to strengthen information dispatch by performing real-time distribution of interviews with the NRA Chairman, NRA Commissioners, as conclusion of the on-site investigation and inspection on social media.

Also in FY 2024, the NRA continued to prepare easy-to-understand explanatory materials to convey the efforts made by the NRA in an easy-to-understand manner, which started in FY 2023. The prepared materials were publicized as reference materials of the NRA.

4. Fostering and Maintaining a Nuclear Safety Culture and a Nuclear Security Culture

(1) Fostering a Healthy Safety Culture Within the Regulatory Body

The NRA Secretariat has been conducting a questionnaire and interview survey for its staff members to confirm the status of fostering and maintaining a nuclear safety culture, implementation status of the management system, and other matters. In the survey conducted in FY 2023, it was found that some staff tended to lack an understanding of nuclear safety culture relates to their daily duties. Therefore, in FY 2024, the NRA conducted a questionnaire and interview survey focused on confirming the staff's recognition and understanding of the nuclear safety culture and the status of the integration of the culture into daily operations, with emphasis on utilizing the investigation results

for discussing improvement measures. The results obtained from this survey were fed back to each section. This was done not only for use in discussion concerning the efforts and other for the next fiscal year during the FY 2024 management review but also to lead to specific improvements in activities to foster and maintain the nuclear safety culture and work management in each section.

In addition, based on the challenges and other issues identified in the FY 2023 investigation, the NRA implemented opinion exchanges among staff members to instill the NRA's core values and principles and revitalize communication among staff members, set up a “gallery space” that exhibits materials for staff as a space for exchanges among staff at any time, and planned a coffee break that leads to

opportunities for exchange between NRA Commissioners and staff members. Furthermore, in order to provide an opportunity to become aware of the starting point of the Nuclear Regulation Authority and for staff to look back on their own actions in light of the NRA's core values and principles, the NRA distributed the “Declaration Card Concerning My Nuclear Safety Culture and Nuclear Security Culture” toward March 11.

In addition to the above, following participation in the Country Specific Safety Culture Forum (CSSCF²) held by the Organization for Economic Co-operation and Development/European Nuclear Energy Agency (OECD/NEA³), each section in the NRA Secretariat took initiative in the efforts to foster and maintain a nuclear safety culture, such as discussions concerning nuclear safety culture by staff members centering around the department in charge of nuclear regulatory inspection.

(2) Fostering a Nuclear Security Culture

The NRA formulated a “Code of Conduct on Nuclear Security Culture” on January 14, 2015, as a guideline to foster and maintain the nuclear security culture. In line with this guideline, the NRA continuously conducts training, etc. related to nuclear security culture for newly recruited staff and those who are expected to assume the post of inspector.

5. Allegation System Regarding Safety Information on Nuclear Facilities

The Whistleblower Protection Act (Act No. 122 of June 18, 2004) prescribes the Reactor Regulation Act, Act on the Regulation of Radioisotopes, etc., Electricity Business Act (Act No. 170 of 1964) and Act on Special Measures Concerning Nuclear Emergency Preparedness as acts for which the NRA should accept whistleblowing.

The NRA establishes the “Allegation Process Regarding Safety Information on Nuclear Facilities” to accept whistleblowing, to thoroughly investigate the facts and to take corrective action such as instructions to the operator, as necessary.

Upon operating Allegation system, the NRA launched the “Nuclear Facility Safety Information Allegation Committee (hereinafter “Allegation Committee”)” consisting of external experts to supervise the investigations and provide instructions/advice. Under the supervision of the Allegation Committee, the NRA carefully confirms whether cases for which relevant information has been provided should be treated as allegations, process allegations as promptly as possible while paying attention to protecting the privacy of the informant, and disclose the operational status of the allegation system to

² Country-Specific Safety Culture Forum

³ Organisation for Economic Co-operation and Development / Nuclear Energy Agency

the public. In FY 2024, there were no new cases accepted, and the cumulative number of cases processed since the establishment of this system in FY 2012 is six.

Section 2. Enhancement of Infrastructure to Support Regulatory Operations

1. Continuous Improvement of Management System

(1) Setting of Third Medium-Term Goals

The NRA sets medium-term goals for each period that are considered to be appropriate in accordance with the Nuclear Regulation Authority Management Rules. As FY 2024 is the final fiscal year of the second medium-term goal period (April 2020 to March 2025), the NRA discussed the goals for results to be achieved in the coming five years and the measures to be implemented to achieve them so that the NRA fulfills its roles and realizes its core values and principles based on the status of efforts, etc. made in that period while taking into consideration the opinions of external experts in the FY 2024 2nd NRA Policy Assessment Meeting (December 10, 2024), solicited comments from staff in the NRA Secretariat, and others, and set the third medium-term goals (from April 2025 to March 2030) at the 60th FY 2024 NRA Commission Meeting (February 5, 2025).

(2) Implementation of Operations and Continuous Improvement Based on Management System

The NRA, in accordance with the Nuclear Regulation Authority Management Rules, develops the Annual Operational Plan for achieving the medium-term goals every year and systematically implements the operations, and by conducting a management system internal audit, managing the non-conformances and area for improvement, and others, is continuously improving the management system and operations. The statuses of activities in FY 2024 are as follows:

(i) Steadfast Execution of Operations Based on the NRA Annual Operational Plan

In FY 2024, the NRA have proactively implemented operations based on the FY 2024 NRA Annual Operational Plan that was determined at the 72nd FY 2023 NRA Commission Meeting (March 19, 2024). In the assessment concerning the progress status of the operational plan as of the end of September 2024, as the necessity to change the plan is recognized in consideration of the operation progress to that point and the changes in the situations including the occurrence of new challenges, the NRA determined changes in the plan at the 44th FY 2024 NRA Commission Meeting (November 20, 2024).

The NRA conducted management reviews at the 65th FY 2024 NRA Commission

Meeting (February 26, 2025) and the 66th FY 2024 NRA Commission Meeting (March 5, 2025), and held discussions upon reception of reports on the implementation status, evaluation, etc. of the management system from the NRA Secretariat and other organizations. Based on these results, etc. the NRA determined the FY 2025 NRA Annual Operation Plan at the 71st FY 2024 NRA Commission Meeting (March 26, 2025).

(ii) Implementation of Management System Internal Audit

In FY 2024, the NRA conducted a management system internal audit of six departments within the NRA Secretariat, verified the appropriateness and validity of the management systems in the departments, and identified 14 good practices that should be deployed to other sections and 7 practices that should be improved in the corresponding departments and other relevant departments.

(iii) Management of Items Requiring Improvement, etc.

The NRA newly confirmed 12 Items Requiring Improvement (non-conformances and area for improvement) concerning the execution of operations in FY 2024 (and one item currently being proceeded), and is appropriately analyzing the factors contributing to the occurrences of these items, including those confirmed in FY 2023 or earlier, evaluating the corrective actions to prevent recurrence, and assessing the effectiveness of those actions. The NRA also implemented corrective actions concerning eight Items Requiring Improvement and confirmed their effectiveness within FY 2024.

(3) Implementation of Policy Evaluation

The NRA is integrally operating the policy evaluation process based on the Government Policy Evaluations Act (Act No. 86 of 2001) and the annual plan development/assessment process based on the NRA management system.

Concerning the measures implemented in FY 2023, the NRA conducted management reviews at the 67th FY 2023 NRA Commission Meeting (February 28, 2024) and the 68th FY 2023 NRA Commission Meeting (March 6, 2024), and assessed the implementation status of the FY 2023 NRA Annual Operational Plan. Based on this result, at the 25th FY 2024 NRA Commission Meeting (August 21, 2024), the NRA determined the policy evaluation document concerning the measures implemented in FY 2023 through discussions, etc. conducted in the 1st FY 2024 NRA Policy Assessment Meeting (July 19, 2024), sent the determined evaluation document to the Minister of Public Management, Home Affairs, Posts and Telecommunications, and disclosed it on the NRA website. Based on this evaluation document, the NRA

determined the result of policy evaluation by the NRA and the status of reflection of these measures to the policy (policy announced in FY 2024) at the 71st FY 2024 NRA Commission Meeting (March 26, 2025), and sent the determined matters to the Minister of Public Management, Home Affairs, Posts and Telecommunications.

The NRA also determined the NRA Policy Assessment Basic Plan (from April 1, 2025 to March 31, 2030) that includes the policy to appropriately reflect third medium-term goal achievement statuses in the assessment and other issues and the FY 2025 NRA Policy Assessment Implementation Plan that stipulates the post-assessment implementation method concerning measures implemented in FY 2024 and others at the 71st FY 2024 NRA Commission Meeting (March 26, 2025), and sent the plans to the Minister of Public Management, Home Affairs, Posts and Telecommunications.

2. Cooperation with International Organizations and Contribution to the International Community

(1) Cooperation with International Organizations

By attending various meetings of IAEA and OECD/NEA and dispatching expert staff to these organizations, the NRA continued to share with the international community the findings and the lessons learned from the accident at TEPCO's Fukushima Daiichi NPS and to disseminate information and exchange opinions to improve international nuclear safety.

(i) IAEA

In FY 2024, expert staff attended international meetings such as the IAEA's Commission on Safety Standards (CSS⁴), Nuclear Safety Standards Committee (NUSSC⁵), Waste Safety Standards Committee (WASSC⁶), Transport Safety Standards Committee (TRANSSC⁷), Radiation Safety Standards Committee (RASSC⁸), Emergency Preparedness and Response Standards Committee (EPReSC⁹) and Nuclear Security Guidance Committee (NSGC¹⁰). The expert staff participated in discussions based on the latest knowledge obtained in Japan and contributed to the formulation of international standards and building a common understanding. (For details on the joint research with international organizations, see Chapter 2, Section 3).

As part of the international information dissemination, the NRA continues to

⁴ Commission on Safety Standards

⁵ Nuclear Safety Standards Committee

⁶ Waste Safety Standards Committee

⁷ Transport Safety Standards Committee

⁸ Radiation Safety Standards Committee

⁹ Emergency Preparedness and Response Standards Committee

¹⁰ Nuclear Security Guidance Committee

periodically publish the results of Sea Area monitoring near TEPCO's Fukushima Daiichi NPS and other areas, as well as conducting joint sampling of marine samples and intercomparison of analysis results with the IAEA (for details, see Section 3 of Chapter 4). In addition, with regard to the International Radiation Monitoring Information System (IRMIS¹¹), which is a framework established by the IAEA to collect and share environmental radiation monitoring information from various countries, data on environmental radiation (air dose rates) at representative monitoring posts in Japan collected by the NRA, has been transmitted to IRMIS since February 2020.

The NRA has received the IAEA's review on discharging of processed water into the sea from multi-nuclide removal equipment (hereinafter "ALPS¹²-treated water") at TEPCO's Fukushima Daiichi NPS. This review is conducted based on the Terms of Reference for the comprehensive cooperation framework on the handling of ALPS-treated water signed between the IAEA and the Government of Japan on July 8, 2021. The second IAEA review after discharging of ALPS-treated water into the sea was implemented from April 23 to 26, 2024, and then the third IAEA review after discharging of ALPS-treated water into the sea was implemented from December 9 to 12, 2024. IAEA concludes in its reports that it did not recognize any inconsistent with the international safety standard requirements.

Concerning safeguards, the NRA has proactively contributed to improving the safeguard technical capabilities of the IAEA and other member states and strengthening international safeguards through frameworks including the Japan Support Program for Agency Safeguards (JASPAS¹³).

From July 22 to August 2, 2024, the NRA accepted the International Physical Protection Advisory Service (IPPAS¹⁴) mission, and the mission team expressed the opinion that Japan's nuclear security system was strong (for details, see Section 1 of Chapter 3). Regarding the hosting of the Integrated Regulatory Review Service (IRRS¹⁵) that the NRA had officially requested in FY 2023, as the NRA had received a reply from IAEA saying that it had temporarily registered its implementation in January 2026, the NRA held a workshop concerning how to proceed with self-assessment by inviting IAEA staff from March 4 to 6, 2025 based on the response policy reported at the 52nd FY 2024 NRA Commission Meeting (January 8, 2025), and is proceeding with the necessary work including preparation of self-assessment documentation.

¹¹ International Radiation Monitoring Information System

¹² Advanced Liquid Processing System

¹³ Japan Support Programme for Agency Safeguards

¹⁴ International Physical Protection Advisory Service

¹⁵ Integrated Regulatory Review Service

(ii) OECD/NEA

Deputy Secretary-General for Technical Affairs Ichimura from NRA Secretariat has been chairing the Committee on Nuclear Regulatory Activities (CNRA¹⁶) of OECD/NEA, and participated in the 51st meeting held from June 6 to 7, 2024 and the 52nd meeting held from December 10 to 11, 2024 and led discussions. NRA Commissioner Ban has been chairing the Working Group on Leadership and Safety Culture (WGLSC¹⁷) under the committee, and participated in the 3rd meeting held from April 8 to 11, 2024 and the 4th meeting held from October 21 to 25, 2024.

The NRA, along with OECD/NEA, held the 1st International Nuclear Reactor Oversight Workshop (INROW¹⁸) in Tsuruga City, Fukui Prefecture from November 10 to 15, 2024, and NRA Commissioner Sugiyama participated in the discussion. In this workshop, together with parties related to WGRO¹⁹, operators, local government staff, and researchers from the Atomic Energy Society of Japan, held discussions on oversight of crossover areas and preparations the operators should make for matters that may cause external power source loss, as well as innovative approaches to oversight method. The NRA also held panel discussions on themes such as desired characteristics for inspectors and inspection expectations by regulatory bodies. The results of the above discussions are planned to be summarized as a report and disclosed by OECD/NEA.

(2) Participation in Initiatives under Various International Conventions on Nuclear Safety, etc.

The NRA, together with the relevant Ministries and Agencies, has been participating on various activities under the Convention on Nuclear Safety, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency, the Convention on the Physical Protection of Nuclear Material, and its Amendment.

The NRA submitted the Japan's 8th national report on the Joint Convention on the Safety of Spent Nuclear

Fuel Management and on the Safety of Radioactive Waste Management in August 2024, NRA Commissioner Nagasaki participated in the 8th discussion meeting held from March 17 to 28, 2025, and conducted a peer review of national reports of countries

¹⁶ Committee on Nuclear Regulatory Activities

¹⁷ Working Group on Leadership and Safety Culture

¹⁸ International Nuclear Regulatory Oversight Workshop

¹⁹ Working Group on Reactor Oversight

including Japan among the contracting countries.

(3) Cooperation with Overseas Nuclear Regulatory Authorities in the Multilateral Framework

From the viewpoint of improving nuclear safety, etc., the NRA is proceeding with information exchange with nuclear regulatory bodies in other countries.

The International Nuclear Regulators Association (INRA²⁰), consisting of the heads of regulatory bodies in major countries with nuclear power plants, is a framework to exchange opinions twice a year, as a rule, on a wide range of issues on nuclear safety regulations. The nine member countries are Japan, the U.S., France, the U.K., Germany, Canada, Sweden, Spain and the South Korea. NRA Chairman Yamanaka participated in the 53rd meeting held in Frankfurt (Germany) from May 3 to 4, 2024, and made a report on the regulation on ALPS-treated water, long-term facility management plan, and others. NRA Chairman Yamanaka participated in the 54th meeting held in Vienna (Austria) on September 16, 2024, and held discussions on information on nuclear regulations and various issues in countries.

The Western European Nuclear Regulators Association (WENRA²¹) consists of the heads of the nuclear regulatory bodies of mainly European countries and holds plenary meetings twice a year as a rule. Japan has been participating in the meeting as an associate member since 2023. Deputy Secretary-General of the NRA Secretariat Kaneko participated in the general meeting held in Larnaca (Cyprus) from April 24 to 25, 2024, and introduced the situation surrounding long-term operation in Japan. Deputy Secretary-General of the NRA Secretariat Kaneko also participated in the general meeting held in Warsaw (Poland) from November 7 to 8, 2024, and held discussions on issues in accordance with the interests of the participating countries.

The Top Regulators' Meeting on Nuclear Safety (TRM²²) is a framework among the nuclear regulatory bodies of Japan, China and South Korea. To improve nuclear safety and strengthen regional cooperation by sharing useful information on common challenges and technical advancement, it has been annually held since 2008. Under the framework of the TRM, the JED²³, a joint emergency drill was hosted by the NRA from February 25 to 26, 2025. The necessary procedures and other matters for sharing prompt and appropriate information among participating bodies in the event of nuclear facility emergency were confirmed through a tabletop exercise, and site visits to the Tokai Daini NPS of Japan Atomic Power Co. and other facilities.

²⁰ The International Nuclear Regulators Association

²¹ Western European Nuclear Regulators Association

²² Top Regulators' Meeting on Nuclear Safety

²³ Joint Emergency Drill

(4) Cooperation with Overseas Nuclear Regulatory Authorities in the Bilateral Framework

Based on the memorandum, etc. on various cooperative measures that was exchanged among 9 countries (11 nuclear regulatory organizations²⁴), the NRA is exchanging information on nuclear regulations with nuclear regulatory bodies in foreign countries through bilateral cooperation.

With French Nuclear Safety Authority (ASN²⁵)²⁶, the 9th Japan-France Regulatory Information Exchange Meeting was held in France from November 19 to 20, 2024 . Chairman Yamanaka (partial participation via online conference system) and NRA Commissioner Sugiyama attended the meeting and exchanged information on the latest trends found in both regulatory authorities, such as stress corrosion cracks, radioactive waste clearance, inspector exchange activities, and others. In addition, NRA Commissioner Ishiwatari travelled to Finland and France in June 2024, inspected Olkiluoto Radioactive Waste Repository, and exchanged regulatory information with ASN commissioners.

Commissioner Sugiyama participated in the Regulatory Information Conference (RIC²⁷) hosted by the U.S. Nuclear Regulatory Commission (NRC²⁸) from March 11 to 13, 2025, participated in the panel discussion on the emergency alarm system, met with NRC commissioners and the secretary-general, French Safety and Radiation Protection Authority (ASNR²⁹) commissioners, and Director-General of Finnish Radiation and Nuclear Safety Authority (STUK³⁰), and other persons, and exchanged regulatory information.

In addition, when NRA Chairman Yamanaka traveled to Austria to attend the 68th IAEA General Conference in September 2024, he met the Director-Generals of Swedish Radiation Safety Authority (SSM) and ASN and exchanged regulatory information.

Furthermore, when the NRA Commissioner Nagasaki traveled to Austria to attend the 8th Review Meeting on Joint Convention on the Safety of Spent Fuel Management in

²⁴ U.S. Nuclear Regulatory Commission (NRC), U.S. Department of Energy (DOE), French Nuclear Safety Authority (ASN), France Institute for Radiation Protection and Nuclear Safety (IRSN), British Office for Nuclear Regulation (ONR), Russian Federal Environmental, Industrial and Nuclear Supervision Service (Rostekhnadzor), Swedish Radiation Safety Authority (SSM), German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), Spanish Nuclear Safety Council (CNS), Finnish Radiation and Nuclear Safety Authority (STUK), Canadian Nuclear Safety Commission (CNSC).

²⁵ Autorité de sûreté nucléaire

²⁶ ASN and IRSN were integrated into French Nuclear Safety and Radiation Protection Authority (ASNR) in January 2025.

²⁷ Regulatory Information Conference

²⁸ Nuclear Regulatory Commission

²⁹ Autorité de sûreté nucléaire et de radioprotection

³⁰ Säteilyturvakeskus

March 2025, he met General Director/Chief Inspector of British Office for Nuclear Regulation (ONR³¹), Director-General of Swiss Radiation Safety Authority (ENSI³²), and ASNR commissioners and exchanged regulatory information.

(5) Opinion Exchange with International Advisors on Nuclear Regulation

The NRA, with the aim of proactively incorporating the latest overseas knowledge concerning the safe use of nuclear energy, commissions foreign experts with abundant experience and advanced knowledge on nuclear regulation as External Advisors to exchange opinions on issues such as expectations for nuclear regulatory systems and the organization of the NRA. In FY 2024, the NRA implemented an opinion exchange meeting with International Advisors on Nuclear Regulation on November 11, 2024, and exchanged opinions on utilization of risk information in regulation and securing and fostering of regulatory human resource.

3. Responses to Legal Affairs

(1) Steady Responses to Legal Affairs

The NRA responded to legal and litigation affairs related to the operation of the NRA, including rapid and appropriate preparation of briefs, oral argument, and response to examinations of witnesses, in collaboration with the Ministry of Justice and related agencies with respect to 45 pending cases. Judgment was made for seven cases in FY 2024.

(2) Continuous Review and Improvement of Laws and Regulation

The NRA constantly reviewed and improved laws and regulations under its jurisdiction, for example, incorporating the latest scientific and technological knowledge into the regulations.

Table 1-1 shows main laws and regulations that were revised in FY 2024.

Table 1-1 Main laws and regulations revised in FY 2024

Names of Laws and Regulations	Overview
Cabinet Order to partially revise the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (Cabinet Order No. 28 of 2025)	Enforced on June 6, 2025 In connection with the enforcement of the act to partially revise the Electricity Business Act and other acts was decided upon in order to establish an electricity

³¹ Office for Nuclear Regulation
³² Eidgenössisches Nuklearsicherheitsinspektorat

	supply system for a decarbonized society (Act No. 44 of 2023. Hereinafter referred to as “Revised Act” in this table.), the provision regarding the current system of approval of extension of the operational period (extension period and the amount of fees) was deleted and the amount of fees regarding the new system was prescribed.
Ordinance to partially revise the regulations on the Rules on Use of Nuclear Fuel Materials, etc. (the NRA Ordinance No. 3, 2024)	Enforced on May 30, 2024 The matters concerning failure of a nuclear fuel cycle facility, etc. to be reported were clarified by requiring only matters concerning the safety of the nuclear facility to be reported.
Regulation on the Use of International Controlled Material (the NRA Ordinance No. 4, 2024)	Enforced on October 1, 2024 Necessary revisions were made because when a user of international controlled material for non-nuclear use who is exempted from part of the safeguards activity imports/exports nuclear fuel material, it became necessary to make the same report, etc. as those for a user of international controlled material for nuclear use to IAEA. Along with these revisions, the necessary provisions were organized to implement safeguards activity more effectively and efficiently.
Ordinance to partially revise the Ordinance on Installation and Operation etc. of commercial power Reactors, etc. (the NRA Ordinance No. 5, 2024)	Enforced on October 15, 2024 Revisions were made to clarify the application range for the approval of change of type certification and type designation regarding specific power reactor facility machines and specific containers in a spent fuel storage facility, and also to improve other operations.

Ordinance to partially revise Ordinance on Installation and Operation etc. of commercial power Reactors and Ordinance on Installation and Operations of Reactors in the Stage of Research and Development (the NRA Ordinance No. 1, 2025)	Enforced on February 13, 2025 Concerning the ordinance to partially revise the Ordinance on Installation and Operation, etc. of commercial power Reactors and Ordinance on Installation and Operations of Reactors in the Stage of Research and Development that was issued in September 2023 in association with the enforcement of the Revised Act (the NRA Ordinance No. 4, 2023; hereinafter “Revised Ordinance in 2023” in this table), the implementation period of special inspection of a facility that has been used longer than the reactor and is also shared with other reactors was reviewed, and revision to provide the special inspection method and its result in the long-term facility management plan was made.
Ordinance to partially revise the NRA Organization Regulation (the NRA Ordinance No. 3, 2025)	Enforced on April 1, 2025 In consideration of the results of requests concerning the organization and quota made in 2025, a revision to specify a position whose installation was newly approved and others was made.
Ordinance to partially revise the the NRA Ordinance on the operational Safety and the protection of specified nuclear fuel materials of the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company, Inc., etc. (the NRA Ordinance No. 2, 2025)	Enforced on June 6, 2025 In association with the enforcement of the Revised Act, the format of the identification cards specified in relevant regulations was revised.
Announcement made in accordance with paragraph 3, Article 6 of the Act on Special Measures Concerning Nuclear Emergency Preparedness following the revision of the Guideline for Nuclear Emergency Preparedness and Response in accordance with paragraph 1, Article 6-2 of the Act (Notification of the NRA No. 8, 2024)	Applied on September 11, 2024 Establishment of a framework, in which the medical cooperation institution for nuclear emergency is designated by the national government as part of the development of the system for securing personnel on a nationwide scale, and other efforts were made.

Notification to partially revise Notification to specify the trainings to be specified by the NRA in accordance with the Regulation on the Use of International Controlled Material, and the Standards that need to be ensured when the Ordinance on Installation and Operations of Reactors, etc. for Testing and Research, etc. are to be saved by electromagnetic means (Notification of the NRA No. 6)	Enforced on October 1, 2024 In association with the revision of the Regulation on the Use of International Controlled Material, necessary provisions including decree number revision were organized.
Partial revision of Notification to Specify the Details, etc. of the Technical Standards Concerning Transport of Nuclear Fuel Material Outside Plants (Notification of the NRA No. 7, 2024)	Enforced on October 15, 2024 In association with the enforcement of the Ordinance to partially revise the Ordinance on Installation and Operation etc. of commercial power Reactors, etc., the attached form was amended to the effect that, with regard to the description concerning the safety analysis of nuclear fuel to be transported in the application for approval of the design of nuclear fuel to be transported, provision of the type designation number pertaining to the transport container in question is sufficient.
Notification to determine the electronic certificate specified by the NRA as set forth in Article 2, paragraph 2, item 2-“二” of the Regulations for Enforcement of the Act on the Advancement of Government Administration Processes That Utilize Information and Communications Technology Regulations for Laws Under the Jurisdiction of the NRA (Notification of the NRA No. 2, 2025)	Enforced on March 31, 2025 In accordance with the Regulations for Enforcement of the Act on the Advancement of Government Administration Processes That Utilize Information and Communications Technology Regulations for Laws Under the Jurisdiction of the NRA (the NRA Ordinance No. 22, 2020), the electronic certificate that can be used for electronic application was specified.
Partial revision of Notification to specify machines, etc. that are important in terms of safety (Notification of the NRA No. 1, 2025)	Enforced on June 6, 2025 Necessary provisions were established in association with the enforcement of Revised Ordinance in 2023.

4. Appropriate Management and Disclosure of Official Documents

(1) Promotion of Official Document Management on Assumption of Digital

Documents

The NRA is considering converting administrative documents stored in paper form into electronic form by utilizing the paper document digitalization service provided by a commercial company from 2025 to 2029. In FY 2024, the NRA implemented the conversion of paper documents in some sections of the NRA Secretariat on a trial basis toward the use of electronic media from 2025.

(2) Correspondence for digitalization of administrative procedures

At the 62nd FY 2024 NRA Commission Meeting (February 12, 2025), the NRA discussed the response status and future response policies toward digitalization of various kinds of procedures for applications/notifications for the NRA based on the policies of the national government as a whole in the Priority Plan for the Advancement of a Digital Society.

Specifically, matters such as the introduction of online applications using e-Gov, a comprehensive search/guidance system common to government-related procedures and the plan to convert administrative procedures concerning national qualifications under NRA jurisdiction to online were determined to be subject to discussion.

(3) Appropriate Information Disclosure in Accordance with the Act on Access to Information Held by Administrative Organs

The NRA received 88 information disclosure requests in accordance with the Act on Access to Information Held by Administrative Organs (Act No. 42 of 1999), appropriately reviewed 85 requests out of 97 requests including ones carried over from the previous fiscal year, and made disclosure decisions, etc..

The NRA also put the information disclosure administrative works online.

5. Effective and Efficient Budget Execution

In order to understand the prospect of budget execution by the whole NRA and contribute to effective and efficient budget execution, the NRA conducted budget execution status investigation three times a year and, based on its result, conducted an appropriate budget execution.

The NRA also held contract committee meetings concerning the review of negotiated contract cases and other matters on an as-needed basis, conducted strict examination, held a meeting of the “Committee to Oversee Contract Optimization Concerning Goods/Services, etc.” set up as a third-party organization in November 2024, and examined the nine extracted contracts for appropriateness, etc. of the contract process including contract method and contract details. The NRA quarterly disclosed the

prospect for placing work orders on its website and disseminated in advance cases whose contracts are scheduled to be concluded, thus increasing the number of operators participating in the work.

Furthermore, in the administrative projects review, the NRA clarified the real status of execution for all projects and, for some projects, conducted necessary inspections while utilizing outsider perspectives toward effective and efficient budget execution.

6. Constructing a Workplace Environment where Each Employee can Feel Fulfilled in their Work

(1) Formulation of Work-Life Balance Action Plan

In order to promote reform in workstyle to promote work-life balance and women's active engagement in professional life, the NRA formulated and the "Specified Employer Action Plan for Measures to Promote Women's Active Engagement of Professional Life, Work-Life Balance and Support Raising Next- Generation Children" (hereinafter "Action Plan") in FY 2016. So far, a revision to incorporate the initiative was made based on the results of an employee survey conducted in 2021 by the Cabinet Bureau of Personnel Affairs as well as the initiative to increase the rate of childcare leave by male employees in association with the cabinet decision of “Children’s Future Strategy” and revision of “Policy on Promotion to Take Childcare Leave/Short-term Leave by Male National Public Employees” (decision by the Council for Promotion of Women's Active Engagement in Professional Life and Work-Life Balance of Employees on December 27, 2019).

In addition, based on this Action Plan, the NRA publishes the "Follow-up on the Action Plan for Promotion of Women's Activities and Work-Life Balance of Employees" and "Information that Contributes to Choice of Occupations" on its website every fiscal year.

(2) Diversification of Working Styles

The NRA started a full-fledged operation of Time and Attendance Management System for improving the management of working hours of staff in FY 2024. The improvement of the convenience in use of the system led to the development of manuals describing how to operate the system to use various styles for the purpose of promoting the utilization of flextime, telework, and other work styles. Additionally, for the employee who was expecting, or whose spouse was expecting a childbirth, the NRA disseminated information on the systems for the pre-parenting registration in an easy-to-understand manner, thereby promoting the use of childcare leave.

(3) Employment of Persons with Disabilities

The NRA promoted employment of persons with disabilities based on the Act to Facilitate the Employment of Persons with Disabilities (Act No.123 of 1960) and achieved employment of over 2.8% above the statutory rate. The NRA developed the system where employees with disabilities can accept work requested from the sections and offices while providing periodical counseling by clinical psychologists and experts and checking work-related difficulties and health conditions that would be detrimental to the work, let employees with disabilities conduct work under appropriate psychological safety considerations.

Additionally, in cooperation with the job assistance organizations for the persons with disabilities, the NRA exchanged information on newly hiring persons with disabilities who seek for job as well as sharing information on the employment status of current employees.

(4) Implementation of 360-degree Evaluation

In accordance with the "Action Plan on the Management System and Nuclear Safety Culture" decided at the 16th FY 2020 NRA Commission Meeting (July 15, 2020), in FY 2022, the NRA started operation of the 360-degree evaluation (multi-faceted observation) whose introduction was determined in order to promote open communication from the viewpoint of fostering and maintaining nuclear safety culture by appointing Designated Senior Official and Directors of divisions and offices among staff members in managerial positions as evaluation targets.

In FY 2024, continuing from FY 2023, all staff members of the NRA Secretariat and the NRA Human Resource Development Center conducted a total of 2,586 evaluations of a total of 174 staff members in managerial positions by expanding the scope of evaluations to Deputy Director in charge of management of divisions and offices. It was determined that the results of five-grade evaluation on an evaluation item basis and the comments that should be conveyed to the evaluation targets among comments described in a free description field by the staff members as an evaluator to promote their own awareness.

(5) Promotion of Diversifying Workstyles

Taking the plan to transfer the NRA to new offices as a good opportunity, the NRA advanced preparation of a new working environment. The NRA also established the Workstyle Diversify Team in FY 2023 in order to boldly review conventional workstyles and create environments friendly to the staff. Under this team, working groups centering around staff participating through internal recruitment that are

respectively grouped under five themes including workstyle reform and maximum use of ICT (information and communication technology) are engaged in the cross-organizational work reform initiatives including the introduction of hotdesking in offices, smooth teleworking, promoting going paperless, and enhancing co-working spaces, such as increasing the number of booths, for concentrated engagement in online conference and work.

(6) Safety Assurance and Service Continuity in the event of a nuclear disaster

The NRA formulated the “NRA Business Continuity Plan (Countermeasures for Tokyo Inland Earthquakes)” (hereinafter “NRA's Business Continuity Plan”) based on the “Business Continuity Plan of the Central Government (Measures against a Tokyo Inland Earthquake) (hereinafter “Service Continuity Plans”) (Cabinet Decision of March 28, 2014). Based on the development of the FY 2023 improvement plan and policies for review toward partial revision of the NRA's Business Continuity Plan discussed at the 30th FY 2023 NRA Commission Meeting (September 6, 2023), the NRA revised the Business Continuity Plan at the 19th FY 2024 NRA Commission Meeting (July 10, 2024). The NRA also conducted self-evaluation for NRA's Business Continuity Plan from October to November 2024, and as a part of comprehensive disaster prevention drills held on “Disaster Prevention Day” in FY 2024, conducted drills related to NRA's Business Continuity Plan including the start-up of the NRA's alternative site, and formulated FY 2024 improvement plans concerning these items to be improved including development of a system to address information dispatch to overseas.

7. Evaluation of Performances Regarding Operations by National Research and Development Agencies

(1) JAEA

The NRA conducts the competent administrator's evaluation of performance of operations under the jurisdiction of the NRA among the operations of JAEA in accordance with the Act on General Rules for Incorporated Administrative Agencies (Act No. 103, 1999) (hereinafter “operation performance evaluation”) every year.

The NRA, based on the self-evaluation results concerning the FY 2023 operation performance results submitted by the JAEA on June 28, 2024, determined the operation performance evaluation in FY 2023 (for parts common to NRA) (rating: A) in the 25th FY 2024 NRA Commission Meeting (August 21, 2024), by using opinions heard from the subcommittee members in the 22nd Subcommittee of the Japan Atomic Energy Agency, National Research and Development Agency Council (July 18, 2024) and 23rd

Subcommittee of the Japan Atomic Energy Agency, National Research and Development Agency Council (July 25 to 26, 2024) and others as references. The results of evaluations summarized by the Ministry of Education, Culture, Sports, Science and Technology, including this evaluation, as of August 27, 2024, were notified to the JAEA and announced on August 28, 2024.

(2) National Institutes for Quantum and Radiological Science and Technology

The NRA conducts performance evaluations on operation performance under the jurisdiction of the NRA among the operations of National Institutes for Quantum Science and Technology every year.

The NRA, based on the self-evaluation results concerning the FY 2023 operation performance submitted by the National Institutes for Quantum Science and Technology in June 28, 2024, determined the operation performance evaluation in FY 2023 (for parts common to NRA) (rating: A) in the 25th FY 2024 NRA Commission Meeting (August 21, 2024) by hearing opinions from the subcommittee members in the 19th Subcommittee of the National Institutes for Quantum Science and Technology , National Research and Development Agency Council (July 9, 2024) and 20th Subcommittee of the National Institutes for Quantum Science and Technology (July 29, 2024). The results of evaluations summarized by the Ministry of Education, Culture, Sports, Science and Technology, including this evaluation, were notified to the National Institutes for Quantum Science and Technology and announced on August 27, 2024.

Section 3. Securing and Developing Personnel Resources

1. Ensuring High Sense of Ethics

Within NRA's Core Values and Principles, the NRA requires its employees to perform their duties with a "high sense of ethics," and to fulfill its mission to protect people and the environment. Each and every employee performs his or her duties in accordance with the five Guiding Principles for Activities.

To ensure this, the NRA distributed the Core Values and Principles Card to all new staff members and conducted ethics training for public servants on April 9, 2024, and October 2, 2024.

In addition, during National Public Service Ethics Month in December, a message from the Ethics Supervisory Officer (Secretary-General of the NRA Secretariat) was distributed to all staff members. Furthermore, the NRA strives to effectively spread ethical awareness by distributing awareness posters with each director's own message and training textbooks, along with leaflets containing the NRA's own rules. Additionally, all staff are required to complete public service ethics training through e-

learning.

2. Securing Human Resources for Nuclear Regulation

(1) New Establishment of Organization and Filling Personnel Position

In order that “Chapter 3 Section 2 Steady Implementation of Safeguard Activities” described later are appropriately implemented, the NRA is planning to establish a Director (in charge of Safeguards) for positively implementing the safeguard operations for the Rokkasho Reprocessing Plant of Japan Nuclear Fuel Ltd. and increase the staff quota by 20 members in total in FY 2025.

To attract large numbers of promising qualified personnel, the NRA actively carried out a campaign for recruitment including presentations on the activities/missions of the NRA to heighten interest in the organization. Specifically, as efforts for recruiting new staff, the NRA participated in employment seminars where parties in the nuclear industry gather, seminars hosted by job sites, and explanatory sessions held by schools including universities for introduced its work, and implemented week-long work experience programs twice in August 2024 and three times in February 2025. Additionally, in order to increase recognition of the NRA, by visiting universities, college of technology and high schools, the NRA conducted full-scale publicity activities for their staff members in charge of recruitment. Furthermore, to hire mid-career workers from the private sector, etc., the NRA utilized career-change websites, newspaper advertising, and municipal PR magazines around nuclear power plant locations and displayed posters at stations nearest to where the nuclear power-related companies are located. The NRA also implemented the same recruiting as that in FY 2023 twice a year and set a further opportunity for recruiting by limiting the target to experts in fields in need of staff in consideration of securing human resources.

For recruiting new graduates, in addition to candidates having passed the National Public Service Examination that were selected through a visit to government offices, the NRA decided to employ those who have passed the "NRA Secretariat Nuclear Engineering Staff Recruitment Examination," a unique recruitment examination for the NRA Secretariat to actively recruit students majoring in nuclear engineering or equivalent. The NRA also conducted a recruitment exam to recruit research staff in charge of technological research and technological investigation work, and secured prospective employees. As a result, the NRA made unofficial employment offers to 31 persons for FY 2024 (3 for Comprehensive Services, 14 for General Services (university graduates), 5 for General Services (high school graduates), 4 for general positions (nuclear engineering), 5 for Research Service, including 2 to be employed in FY 2024 and 29 to be employed in FY 2025) through its recruitment activities in FY 2024. The

number of NRA staff recruited in FY 2024 is 36, including staff whose employment was decided in FY 2023 and two persons employed in FY 2024.

In FY 2024, the NRA unofficially adopted 23 mid-career hires mainly in the areas of safety review/inspection, nuclear disaster prevention, and radiation hazard prevention (8 to be employed in FY 2024 and 12 to be employed in FY 2025). The number of NRA staff recruited in FY 2024 is 39 in total, including one unofficially employed in FY 2023 (including one employed through the Mid-career Recruits Selection Examination (for the employment ice age generation) encouraged by the National Personnel Authority) and eight employed in FY 2024 as mentioned above.

The actual number of NRA staff is 1,090 and the ratio of the actual number to the staff quota is 96.2%, as of January 1, 2025.

Table1-2 Situation of securing human resources from FY 2018 to 2024 (Unit: persons)

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
Mid-career hires※1	23	33	21	16	23	49	39	204
New graduates※2	29	22	29	26	40	38	31	215
Total	52	55	50	42	63	87	70	419

*1 Number of personnel hired in the relevant fiscal year

*2 Number of personnel hired by April 1 of the next fiscal year based on recruitment activities in the relevant fiscal year

(2) Efforts in the Program of Human Resource Development Nuclear Regulations

To broadly secure and develop human resources engaged in nuclear safety and regulation, as well as to steadily improve nuclear regulations in the future, the NRA launched a subsidy program for human resource development for nuclear regulations, which has been carried out in collaboration with universities and other institutions since FY2016. In FY 2024, this program was applied in a total of 20 cases (4 cases adopted in FY 2020, 6 cases in FY 2021, 4 cases in FY 2022, 3 cases in FY 2023 and 3 cases in FY 2024) and implemented by universities, colleges of technology and other institutions.

In addition, continuing from FY 2023, the NRA conducted measurement of operation effects, investigations as to whether to continue operations for which subsidies have terminated, discussion of operation evaluation method, and others. Furthermore, concerning the acquisition of external fund through utilization of the intellectual properties that are obtained as a result of implementation of operations, which was requested in the opinion exchange meeting held in 2023, the NRA revised the granting guidelines.

3. Developing Human Resources for Nuclear Regulation

(1) Staff members Career Paths

To clarify the basic principles and general framework of measures for staff development as human resources, the NRA established the "Basic Policy on Human Resource Development for NRA Staff" in FY2014, and on September 3, 2014, established career paths as a model for administrative and research staff to accumulate experience and deepen responsibility, taking into account the work to be performed by the NRA.

For general technical service, comprehensive service, general clerical service, and research staff, the NRA established respective career path images, which embodied their expected roles according to their years of experience, areas of expertise they should possess, provision of opportunities to improve their expertise, and job qualifications they can obtain, and held a briefing session for the employees. In FY 2024, the NRA expanded and strengthened the career consulting system so that the staff in charge of consultation can give careful attention to the career path of each staff member, and continuing from the previous fiscal year, to reduce anxieties, and other initiative. of the staff members at the time of transfer, the NRA continued its efforts to inform staff to be transferred of the information on the transfer without creating any gap in recognition between the personal division and destination department.

As a result of these efforts, in the survey about “satisfaction with post assigned in accordance with the capabilities” whose targets are limited to the staff members transferred in the period from October of 2023 to September 2024 (including the persons who were recruited and moved-in, etc.), compared to the replies in the previous year’s survey conducted under the same criteria, the degree of satisfaction has increased from 10.3% to 14.3% for “Very Satisfied” and from 33.0% to 36.5% for “Satisfied.” These results show that there certain results have been obtained.

In addition, with regard to skill improvement related to back-office work, which is primarily carried out by general clerical staff, the NRA decided to improve the back-office work, which are primarily carried out by general clerical staff, based on OJT³³ and to introduce the competency management system for prompting learning of skills and knowledge based on supporting laws, and manuals as an effective means to carry out OJT. Based on the results of this trial operation in FY 2023, the NRA specified the scope of the targeted work and started its operation after reviewing the procedures in FY 2024.

³³ On the Job Training

Futhermore, the NRA held the NRA workplace visit day once in FY 2024 as an opportunity to enhance the staff's comprehension of the operations of the NRA work they engage in so that the recognition of the staff's career path image is made more specific and the individual staff members can clearly draw their career path images. In this event, the staff members of the NRA including young members deepened their understanding on the NRA work that they engage in by visiting departments within the NRA Secretariat and the office of the NRA Commissioners and obtaining information on the details of work and related knowledge.

(2) Implementing and Improving Training

Under the three-grade job qualification system for the five fields of “nuclear inspection,” “nuclear safety review,” “safeguard inspection,” “emergency preparedness and response,” and “radiation regulation”, the NRA provided training and OJT and bestowed job qualifications³⁴ on 120 personnel in FY 2024.

In addition, The NRA provided educational training courses for basic job qualifications in five job fields to continually secure and develop human resources capable of carrying out regulatory work. In FY 2024, while five staff members who had taken the "Intensive Program," in which they leave work to concentrate on training, completed the same educational training courses on April 30, 2024, eight staff members were newly selected to take the “Intensive Course”. 46 staff members selected by FY 2024 have been continuing to take the "Part-time Program" in which they took training courses concurrently with their work duties. In 2024, three trainees obtained the basic job qualification in one field respectively from the said course. Concerning the “Part-time Program” whose target are proper employees, the NRA added mid-career recruited staff to its target.

Furthermore, the NRA carried out an ongoing education program for those who have been certified for a certain period to learn the latest standards to maintain their expertise. The program also focuses on maintaining and improving communication skills for those with intermediate qualifications and management skills for those with advanced job qualifications.

Concerning the educational training courses, which had been held since FY 2018, the NRA proceeded with discussions to review the number of target qualifications in the “Intensive Program” based on the implementation status and the result of effectiveness assessments in the past, expand the target of the training courses to all employees, and

³⁴Qualifications that must be possessed by persons appointed to positions with high levels of expertise and experience in the in the Secretariat of the NRA or the NRA Human Resource Development Center.

enable them to aim to acquire the job qualification anytime from FY 2025.

(3) Human Resource Development for Research Staff

To promote human resource development and exchange through joint research, the NRA engaged a total of 48 staff members in joint research in FY 2024, and one staff member dispatched to JAEA to work exclusively on research activities. Additionally, the NRA developed the circumstances for the research staff to receive instructions in universities to obtain doctoral degrees in order that they can enhance their own expertise. Thus, one personnel obtained a doctoral degree in FY 2024.

Furthermore, the NRA proactively made presentations at academic conferences based on safety research results and sought to improve the skills of research staff through discussions with experts.

(4) Efforts Concerning Development and Securing of Global Human Resource

To enhance the necessary skills for international operations, the NRA recruited personnel with abundant international experience as mid-career professionals, improved the staff members' basic skills such as English language proficiency through education and training programs, enhanced their competence in implementation of international operations through joint research with foreign research institutions and others, and ensured that young staff members had opportunities to gain international experience. Also, from the viewpoint of human resource development the NRA dispatched 13 staff members to international organizations such as the IAEA and OECD/NEA as well as national nuclear regulatory bodies such as ONR. In addition, the NRA promoted mid-career and young staff as members to participate in international conferences and secured opportunities for them to gain international experience and work as international human resources on a long-term and continuous basis.

Chapter 2 Strictly and properly implementing nuclear regulations and enhancing the technological foundations

○Summary of Chapter 2

(Implementation of Review based on the Reactor Regulation Act)

Concerning commercial power reactors, in FY 2024, the NRA permitted, for main facilities, the design and construction plan and safety program of Unit 6 of TEPCO's Kashiwazaki-Kariwa NPS and the safety program of Shimane NPS Unit 2 of Chugoku Electric Power Company, but did not permit the change of reactor installation for Unit 2 of Japan Atomic Power Tsuruga NPS. Concerning special facilities for severe accident management, the NRA permitted the change of reactor installation for Shimane NPS Unit 2 of Chugoku Electric Power Company and the design and construction plan of the Tokai Daini NPS of Japan Atomic Power Company. (4th of five divisions in total) and Onagawa NPS Unit 2 of Tohoku Electric Power Company. (1st of two divisions in total). For aged commercial power reactors, in FY 2024, the NRA permitted 2 extensions of the operational period, 4 changes of the safety program, and 11 long-term facility management plans including the extension of operational periods of Units 3 and 4 of Takahama PS of Kansai Electric Power Company, the long-term facility management plan of Units 3 and 4 of Ohi NPS, and changes of safety programs concerning the technical assessment of aging management of Unit 1 of Takahama PS and Unit 3 of Ikata NPS. Additionally, in order to ensure review transparency and predictability, the NRA disclosed a report to show the entire picture of the progress in the licensing review of conformity to the new regulatory requirements and the like once per quarter.

Concerning the nuclear fuel recycling facility and other facilities, the NRA permitted the design and construction plans for the radioactive waste disposal facilities of JAEA Nuclear Fuel Cycle Engineering Laboratories (nine applications in total) and the waste storage facility of Oarai Nuclear Engineering Institute (five applications in total). Additionally, the NRA granted 29 permissions (approval) for nuclear material utilization facilities. In addition to ensuring transparency and predictability of the reviews, in order to organize the status of the reviews of various types of nuclear fuel cycle facilities and other centers, the NRA disclosed a report to show the entire picture of the progress in the conformity review on licensing review of conformity to the new regulatory requirements and the like semiannually.

(Implementation of inspections based on the Reactor Regulation Act)

The NRA conducted a comprehensive assessment in FY 2023 on May 29, 2024 and changed the action matrix of Unit 3 of Takahama PS of Kansai Electric Power Co., Inc. to Category 2 on April 1, 2023 upon reception of the 1st quarter operation result from Kansai Electric Power Co., Inc. on August 9, 2023 because the number of deviations from the operational restrictions of a facility for severe accident management in the past

four quarters totalled 4 cases. As the NRA confirmed that the cause investigation and drafting of improvement measures concerning the deviations from the operational restriction as mentioned above had been appropriately implemented in a subsequent additional investigation, the NRA, having judged that autonomous improvement is expected to be made even when performance has degraded, determined to return the action matrix to Category 1 and then conduct a normal basic inspection in FY 2024. Concerning the TEPCO Kashiwazaki-Kariwa NPS, the NRA changed the action matrix to Category 4 in FY 2020 and, since then, has continuously conducted additional inspections. Based on the results of additional inspections that were conducted by December 2023 and the results of on-site investigation and opinion exchange with the president of TEPCO, the NRA confirmed that the safety activities had been improved and autonomous improvement by TEPCO could be expected in the future, and then determined to change the action matrix from Category 4 to Category 1 and then conduct normal basic inspections after setting priority items in FY 2024. Other nuclear facilities were evaluated to be in a state where autonomous improvements can be expected of the operators, and regular baseline inspections were continuously conducted in FY 2024 as well.

There were 11 inspection findings in the nuclear regulatory inspections that were conducted in FY 2024 and reported to the NRA (commercial power reactors: significance level "green," severity level "SL IV" (including one case for which importance evaluation only was conducted); nuclear fuel recycle facilities and other centers: significance level "no additional action," and severity level "SL III"). Furthermore, in FY 2024, as a part of legal requirements, the NRA completed 115 legal confirmations and 11 pre-service inspections which were carried out based on the transitional measures at the time of the revision of the Reactor Regulation Act.

In FY 2024, an "Information Exchange Meeting on the Inspection Program" was held one time to exchange opinions with external experts and nuclear operators for the continuous improvement of the nuclear regulatory inspection system. Concerning the appropriateness confirmation of the operator's Probabilistic Risk Assessment (PRA) model used in nuclear regulatory inspections, at the 32nd FY 2024 NRA Commission Meeting (September 18, 2024), the NRA received a report on the results of the appropriateness confirmation of level 1 PRA models prepared by the operator of Unit 7 of Kashiwazaki-Kariwa NPS, a report on the status of the operator's responses to the findings by the NRA Secretariat in the appropriateness confirmations made so far.

(Promotion of Safety Research and Continuous Improvement of Regulatory Requirements)

In FY 2024, the NRA conducted 17 safety research projects in 13 fields, including

three new projects. As the results of the safety research, 3 NRA Technical Reports and 5 NRA Technical Notes were published in FY 2024. Additionally, the NRA published 16 papers and 10 conference proceedings (peer-reviewed) and made 32 presentations at academic conferences. In an attempt to establish a technology base to cope with regulatory research subjects in the future, the NRA determined to newly implement “Operation to Establish Technology Base for Strengthening Studies on Nuclear Regulation” from FY 2024 and adopted five individual operations.

In the evaluation of safety research, the NRA approved a post-evaluation of 5 safety research projects completed in FY 2023, a mid-term evaluation of 2 ongoing safety research projects, and a pre-evaluation of 11 safety research projects to be started from FY 2025.

In addition, the NRA conducted bilateral information exchange and participated in 15 international joint research projects in OECD/NEA to gather technical knowledge in each research field, including the latest trends. Additionally, the NRA implemented 10 joint research projects with universities and other organizations.

In order to reflect the latest scientific and technological knowledge in the regulations, the NRA collected and analyzed information on the results of safety research and the information on natural hazards, information concerning international and domestic accidents and troubles in the nuclear facilities, and others, and to screen whether to reflect them in the regulations, the NRA held seven Technical Information Committee meetings in FY 2024. In addition, the NRA positively progressed discussion on reflection of knowledge obtained from investigation and analysis of the accident of TEPCO's Fukushima Daiichi NPS to the regulations, response in the event of the failure of the transformer due to an earthquake with a maximum seismic intensity of 7 in the Noto region of Ishikawa Prefecture on January 1, 2024, discussion on reflection of review experience and results to the regulation requirements, and technical evaluation of industry standards.

(Continuous Improvement of Regulatory Activities and Response to New Regulatory Needs)

Concerning the review of the operation of the safety improvement evaluation system, the RSEC and NFSEC conducted a review and summarized “Review of approach to evaluation systems for safety improvement of power reactor facilities and the operation thereof” on July 5, 2024. Then, having gone through an inter-commissioner discussion concerning the policy on review of the system in consideration of the opinion exchange between both chairmen and reports, the NRA approved the draft of relevant rules and guidance concerning the rationalization of materials explaining the latest condition of devices in commercial power reactors and others as well as solicitation of public

comments as a short-time review at the 55th FY 2024 NRA Commission Meeting (January 22, 2025).

Concerning the safety regulations on aged commercial power reactors, the NRA deliberated on the laws and regulations that are necessary for the full-fledged enforcement of the long-term facility management plan approval system (June 6, 2025), solicited public opinions and interviewed with operators, and then requested cabinet discussion on relevant cabinet orders and revision of relevant rules, etc. at the 55th FY 2024 NRA Commission Meeting (January 22, 2025)

Concerning the clearance centralized treatment operation of decommissioning waste of the NPS in Fukui Prefecture, the NRA received reports on the details of the opinion exchange among the NRA Secretariat, Fukui Prefecture, the Agency for Natural Resources and Energy, and relevant operators held in 2023 and future response to the technical issues based on those opinions at the 2nd FY 2024 NRA Commission Meeting (April 10, 2024). Then, the NRA approved the specific response policy on the technical issues at the 57th FY 2024 NRA Commission Meeting (January 29, 2024).

Concerning the replacement reactors, an operator made a proposal on the setup of a place for discussion between the regulator and operators at the CNO opinion exchange meeting, and based on this proposal, the NRA approved setup of a working-level technical opinion exchange meeting with operators related to the design of the replacement reactors at the 36th FY 2024 NRA Commission Meeting (October 9, 2024). In FY 2024, two opinion exchange meetings were held (December 9, 2024 and March 18, 2025).

Section 1. Implementation of Review based on the Reactor Regulation Act

1. Status of Reviews, etc. for Commercial Power Reactors

Since the new regulatory requirements for commercial power reactors came into effect on July 8, 2013, the NRA is currently reviewing applications for changes in basic design with the new regulatory requirements, based on the policy approved by the NRA. A total of 90 review meetings were held in FY 2024. In addition, in order to ensure transparency and predictability of the review process, the NRA compiled the status of applications and dispositions regarding the licensing review of conformity to the new regulatory requirements once per quarter and published them on the NRA website.

(1) Review Meeting on Conformity to the New Regulatory Requirements

(i) Main Facility

To date, 27 plant applications have been submitted and are being reviewed as shown in Table 2-1.

Concerning the review for permission of change of reactor installation, for Tomari NPS Unit 3 of Hokkaido Electric Power Co., Inc., NRA Commissioner Sugiyama conducted an on-site investigation for the installation condition, etc. of the facility compliant with the new regulatory requirements on April 25 and 26, 2024, NRA Commissioner Yamaoka conducted an on-site investigation concerning the geology and geological structure of the site, volcano impact evaluation, etc. on October 24 and 25, 2024, and in the review meetings up to 1309th review meeting (December 24, 2024), the review of all review items has almost finished and the review results are being summarized.

Concerning the Higashidori NPS Unit1 of Tohoku Electric Power Co., Inc., the NRA is conducting review concerning volcano impact evaluation. Concerning the review on the facility design policy and others, the operator explained at the review meeting on May 31, 2024 that it would take around one and a half years in discussion and preparation.

Concerning Hamaoka NPS Units 3 and 4 of Chubu Electric Power Co., Inc., the NRA assessed that the operators' settings of design basis for tremors and design basis tsunami were appropriately studied in general at the 1282nd review meeting (September 6, 2024) and 1287th review meeting (October 11, 2024), respectively. Additionally, on December 16 and 17, 2024, the NRA Commissioner Yamaoka conducted on-site investigations concerning the geology and geological structure of the site. Based on the status of review concerning the setting of design basis ground motion and design basis tsunami, the NRA exchanged opinions on how to proceed with the review in the future with operators at the 43rd NRA Commission Meeting (November 13, 2024) and

determined to resume the review concerning the facility design policy and others on Units 3 and 4 in parallel. The NRA continues the review concerning the geology and geological structure of the sites and the facility design policy.

Concerning the Ohma NPS of Electric Power Development Co., Ltd., the NRA assessed that the operator's setting of design basis tsunami was appropriately studied in general at the 1300th review meeting (November 29, 2024). The NRA continues the review concerning the geology and geological structure and setting of the design basis ground motion of the site.

Concerning Shika NPS Unit 2 of Hokuriku Electric Power Company, staff from the NRA Secretariat conducted an on-site confirmation of the impact of the 2024 Noto Peninsula Earthquake and at the 1282nd review meeting (September 6, 2024), the NRA confirmed that the earthquake did not affect the assessment result of the geology and geological structure by an existing operator. In addition, concerning the volcano impact evaluation by operator, the NRA assessed that evaluation was appropriately conducted in general at the 1321st review meeting (February 21, 2025). The NRA continues to review the geology and geological structure and setting of design basis ground motion around the site also by taking into consideration the response to "Long-term Evaluation of Offshore Active Faults on Japan Sea Side - from Northern Offshore of Hyogo Prefecture to Offshore of Joetsu Region of Niigata Prefecture - (August 2024 edition)" published by the Earthquake Investigation Research Promotion Headquarters on August 2, 2024.

Concerning Shimane NPS Unit 3 of The Chugoku Electric Power Co., Inc., the NRA assessed that discussion on the assessment of the geology and geological structure around the site by the operator was appropriately conducted in general at the 1326th review meeting (March 14, 2025). The NRA continues to sequentially review the facility design policies beginning with items related to the effectiveness assessment of facility for severe accident management, etc.

Concerning the Japan Atomic Power Tsuruga NPS Unit 2, Japan Atomic Power Co. Inc. made a revision application for the part describing the activity of K-fault identified in on-site D-1 trench and the continuity with fracture zones that pass directly under the reactor buildings (hereinafter "activity and continuity of K-fault") on August 31, 2023. In response to this, the 30th FY 2023 NRA Commission Meeting (September 6, 2023) confirmed that the application for revision was one in conformity with the requirements of the application format and the revision required in the guidance documents was made, the NRA approved to restart future response policy and review meetings. After resumption of the review, reviews were conducted in eight review meetings and two on-site investigations were conducted by NRA Commissioner Ishiwatari (December 2023

and June 2024). In the 1272nd review meeting (July 26, 2024), the review team for examining conformity to the new regulatory requirements (hereinafter “review team”) confirmed that the operator explained the details of the application and answered to the findings by the review team, and then summarized the judgment that the application did not conform to Article 3 paragraph 3 of the Regulations on the Standards for the Locations, Structures, and Equipment of Commercial Power Reactors (the NRA Ordinance No. 5, 2013; hereinafter “design permission standard regulations”). At that point, the operator said that it was scrutinizing the result of the review meeting and considering requesting an additional investigation, and requested the NRA to conduct investigation once the investigation results are summarized. At the 22nd FY 2024 NRA Commission Meeting (July 31, 2024), following reception of judgment by the review team and request from the operator, the NRA confirmed the purpose, etc. of the request from the operator and then approved discussion on the handling of the corresponding application in the future. At the 24th FY 2024 NRA Commission Meeting (August 2, 2024), the NRA exchanged opinions with the management layer of Japan Atomic Power and received an explanation of the main additional investigation plans being studied, and then confirmed its details. The NRA, as it confirmed that the additional investigation plans lacked specifics and their implementation periods were unclear, summarized a draft of results of the review of the corresponding application and gave instruction to consult the NRA again. At the 27th FY 2024 NRA Commission Meeting (August 28, 2024), the NRA determined to summarize a draft of the review result to the effect that the Tsuruga NPS could not be confirmed to conform to Article 3, paragraph 3 of the design permission standard rules because, concerning the activity and continuity of K-fault, K-fault could not be denied to have been active since the Late Pleistocene Era (about 120,000 to 130,000 years ago or later) and continuity with fracture zones that pass directly under the Unit 2 reactor buildings could not be denied, and approved solicitation for scientific and technological opinions on the review report draft (30 days). At the 42nd FY 2024 NRA Commission Meeting (November 13, 2024), the NRA approved the idea on the scientific and technological opinions on the review report draft and determined to make a disposition not to permit the application.

Concerning the review of the design and construction plan, in FY 2024, the NRA approved TEPCO’s Kashiwazaki-Kariwa NPS Unit 6 on September 2, 2024.

Concerning the review of the safety program, in FY 2024, the NRA approved the Shimane NPS Unit 2 of Chugoku Electric Power Co. on May 30, 2024 and TEPCO’s Kashiwazaki-Kariwa NPS Unit 6 on February 28, 2025.

(ii) Special Facility for Severe Accident Management

In the review of Special Facilities for Severe Accident Management, it is confirmed that there is no risk concerning the functions necessary to respond to a major accident or other incidents even in the event of an intentional collision by a large aircraft or other terrorist act. Applications for 19 plants have been submitted so far and the NRA is reviewing the applications as shown in Table 2-2.

Concerning the review for permission of change of reactor installation, in FY 2024, the NRA approved the Shimane NPS Unit 2 of Chugoku Electric Power Co. on October 23, 2024.

Concerning the review of the design and construction plan, in FY 2024, the NRA approved the 4th application of five divided applications in total regarding the Tokai Daini NPS of Japan Atomic Power Co. on December 5, 2024. Following a defect in the seawall construction, the NRA is reviewing the 5th application for the design change, etc. of the seawall submitted on August 2, 2024.

Concerning the Onagawa NPS Unit 2 of Tohoku Electric Power Co., Inc., the NRA approved the 1st application of the two divided applications in total on March 28, 2025. Additionally, the NRA accepted the 2nd application of the two divided applications in total on September 26, 2024, and is proceeding with the review.

Concerning Unit 7 of TEPCO's Kashiwazaki-Kariwa NPS, the NRA accepted the 4th application of the four divided applications in total on November 28, 2024, and is proceeding with the review.

Concerning Shimane NPS Unit 2 of Chugoku Electric Power Co., the NRA accepted the 1st application of two divided applications in total on January 31, 2025, and is proceeding with the review.

Concerning Unit 6 of TEPCO's Kashiwazaki-Kariwa NPS, the NRA accepted the 1st application regarding the shared part of Unit 7 of the three divided applications in total on February 27, 2025, and is proceeding with the review.

(iii) Others

Concerning the application for permission of change of reactor installation of spent fuel dry storage facility in the site of a nuclear power plant, in FY 2024, the NRA proceeded with review of Onagawa NPS Unit 2 of Tohoku Electric Power Co., Inc., Units 1 to 4 of Takahama PS and Units 3 and 4 of Ohi NPS of Kansai Electric Power Co., Inc., and Unit 3 of Mihama NPS of Kansai Electric Power Co., Inc.

In response to “Long-term Evaluation of Offshore Active Fault on Japan Sea Side - from Northern Offshore Hyogo Prefecture to Offshore of Joetsu Region of Niigata Prefecture -(August 2024 edition)” published by the Earthquake Investigation Research

Promotion Headquarters on August 2, 2024, the NRA is checking the impact on the design basis ground motion and design basis tsunami of Units 1 to 4 of Takahama PS of Kansai Electric Power Co., Inc., Units 3 and 4 of Ohi NPS of Kansai Electric Power Co., Inc., Unit 3 of Mihama NPS of Kansai Electric Power Co., Inc., and Units 6 and 7 of TEPCO's Kashiwazaki-Kariwa NPS, for which the NRA has permitted the change of reactor installation so far. In the 1304th review meeting (December 13, 2024), the NRA confirmed that Units 1 to 4 of Takahama PS are not affected, and is still confirming the impacts on Units 3 and 4 of Ohi NPS and Unit 3 of Mihama NPS. Concerning Units 6 and 7 of TEPCO's Kashiwazaki-Kariwa NPS, the NRA is confirming the impacts in meetings concerning the interview on the current status of the response to the "Long-term Evaluation of Offshore Active Fault on Japan Sea Side" (August 2024 edition).

Table 2-1 Status of Reviews and Inspections of Conformity of Commercial Power Reactors Concerning Conformity to New Regulatory Requirements

○Commercial Power Reactor

No.	Applicant	Targeted Power Reactor		New Regulatory Requirements Conformity Review			Pre-service check* ¹
				permission of (changes in) basic design	Approval of Design and Construction Plans	Approval of Change in Safety Requirements	
1	Japan Atomic Power Company	Tokai Daini NPS	BWR	Completed	Completed	Under review	Under inspection
2		Tsuruga NPS	Unit 2	PWR	Not applied ²	Not applied	Under review
3	Electric Power Development Co. Ltd.	Ohma NPS	Under construction	Under review	Under review	Not applied	
4	Hokkaido Electric Power Co., Inc.	Tomari NPS	Unit 1	PWR	Under review	Under review	Under review
5			Unit 2	PWR	Under review	Under review	Under review
6			Unit 3	PWR	Under review	Under review	Under review
7	Tohoku Electric Power Co., Inc.	Higashidori NPS	BWR	Under review	Under review	Under review	
8		Onagawa NPS	Unit 2	BWR	Completed	Completed	Completed
9			Unit 3	BWR	Not applied	Not applied	Not applied
10	TEPCO Holdings	Higashidori NPS	Under construction	Not applied	Not applied	Not applied	
11		Kashiwazaki Kariwa NPS	Unit 1	BWR	Not applied	Not applied	Not applied
12			Unit 2	BWR	Not applied	Not applied	Not applied
13			Unit 3	BWR	Not applied	Not applied	Not applied
14			Unit 4	BWR	Not applied	Not applied	Not applied
15			Unit 5	BWR	Not applied	Not applied	Not applied
16			Unit 6	BWR	Completed	Completed	Completed
17			Unit 7	BWR	Completed	Completed	Completed
18	Chubu Electric Power Co., Inc.	Hamaoka NPS	Unit 3	BWR	Under review	Not applied	Not applied
19			Unit 4	BWR	Under review	Under review	Under review
20			Unit 5	BWR	Not applied	Not applied	Not applied
21	Hokuriku Electric Power Co., Inc.	Shika NPS	Unit 1	BWR	Not applied	Not applied	Not applied
22			Unit 2	BWR	Under review	Under review	Under review
23	Kansai Electric Power Co., Inc.	Mihama NPS	Unit 3	PWR	Completed	Completed	Completed
24		Ohi NPS	Unit 3	PWR	Completed	Completed	Completed
25			Unit 4	PWR	Completed	Completed	Completed
26		Takahama PS	Unit 1	PWR	Completed	Completed	Completed
27			Unit 2	PWR	Completed	Completed	Completed
28			Unit 3	PWR	Completed	Completed	Completed
29			Unit 4	PWR	Completed	Completed	Completed
30	Chugoku Electric Power Co., Inc.	Shimane NPS	Unit 2	BWR	Completed	Completed	Completed
31			Unit 3	Under construction	Under review	Not applied	Not applied
32	Shikoku Electric Power Co., Inc.	Ikata NPS	Unit 3	PWR	Completed	Completed	Completed
33	Kyushu Electric Power Co., Inc.	Genkai NPS	Unit 3	PWR	Completed	Completed	Completed
34			Unit 4	PWR	Completed	Completed	Completed
35		Sendai NPS	Unit 1	PWR	Completed	Completed	Completed
36			Unit 2	PWR	Completed	Completed	Completed

(Notes) Power reactors whose decommissioning plans have been approved or whose decommissioning has been announced by the nuclear operator are excluded.

(*1) Including pre-service inspections pursuant to Article 7-1 of Supplementary Provisions of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors for Strengthening Safety Measures in the Use of Nuclear Power (Act No.15 of 2017)

(*2) On November 13, 2024, the NRA determined not to permit the application for permission for change of reactor installation of nuclear reactor applied on November 5, 2015.

■: Nuclear power stations whose status changed in FY 2024.

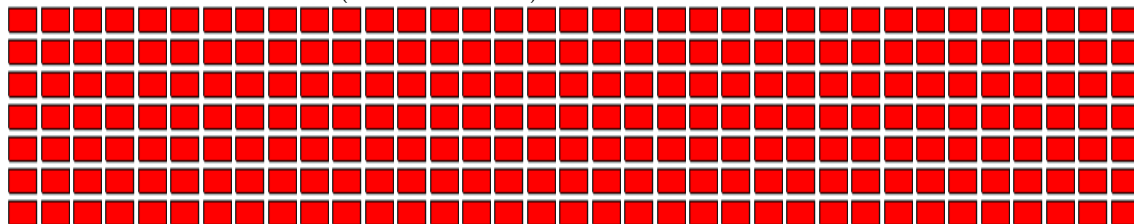
**Table 2-2 Status of Reviews and Inspections of Conformity of Commercial Power Reactors Concerning Conformity to New Regulatory Requirements
(Special Facility for Severe Accident Management)**

○Commercial Power Reactors [Special Facilities for Severe Accident Management]

No.	Applicant	Targeted Power Reactor		New Regulatory Requirements Conformity Review			Pre-service check*1
				permission of (changes in) basic design	Approval of Design and Construction Plans	Approval of Change in Safety Requirements	
1	Electric Power Development Co. Ltd.	Ohma NPS	Special facility	Under review			
2	Japan Atomic Power Company	Tokai Daini NPS	Special facility	Completed	1st: Completed 2nd: Completed 3rd: Completed 4th: Completed 5th: Under review	Under review	Under inspection
3	Hokkaido Electric Power Co., Inc.	Tomari NPS	Unit 3 Special facility	Under review			
4	TEPCO Holdings	Kashiwazaki Kariwa NPS	Unit 6 Special facility	Completed	1st: Under review 2nd: Not applied 3rd: Not applied		
5			Unit 7 Special facility	Completed	1st: Under review 2nd: Under review 3rd: Under review 4th: Under review		
6		Mihama NPS	Unit 3 Special facility	Completed	Completed	Completed	Completed
7		Ohi NPS	Unit 3 Special facility	Completed	Completed	Completed	Completed
8			Unit 4 Special facility	Completed	Completed	Completed	Completed
9		Takahama PS	Unit 1 Special facility	Completed	Completed	Completed	Completed
10	Kansai Electric Power Co., Inc.		Unit 2 Special facility	Completed	Completed	Completed	Completed
11			Unit 3 Special facility	Completed	Completed	Completed	Completed
12			Unit 4 Special facility	Completed	Completed	Completed	Completed
13	Chugoku Electric Power Co., Inc.	Shimane NPS	Unit 2 Special facility	Completed	1st: Under review 2nd: Not applied		
14	Shikoku Electric Power Co., Inc.	Ikata NPS	Unit 3 Special facility	Completed	Completed	Completed	Completed
15	Kyushu Electric Power Co., Inc.	Genkai NPS	Unit 3 Special facility	Completed	Completed	Completed	Completed
16			Unit 4 Special facility	Completed	Completed	Completed	Completed
17		Sendai NPS	Unit 1 Special facility	Completed	Completed	Completed	Completed
18			Unit 2 Special facility	Completed	Completed	Completed	Completed
19	Tohoku Electric Power Co., Inc.	Onagawa NPS	Unit 2 Special facility	Completed	1st: Completed 2nd: Under review		

(Notes) Power reactors whose decommissioning plans have been approved or whose decommissioning has been announced by the nuclear operator are excluded.

*1) Including pre-service inspections pursuant to Article 7-1 of Supplementary Provisions of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors for Strengthening Safety Measures in the Use of Nuclear Power (Act No.15 of 2017)



■ ■ ■ ■ ■ ■ ■ ■ ■ ■: Nuclear power stations whose status changed in FY 2024.

(2) Review concerning aging power reactor facilities

In compliance with Act to partially revise the Electricity Business Act to establish an electricity supply system to realize a decarbonized society which was promulgated on June 7, 2023, the system concerning measures for aging nuclear power plants was reviewed and it was determined that the existing “The System of Approval for Extension of the Operational Period” and “The System of Technical Assessment of Aging Management” should be unified into “The System of Approval for Long-Term Facility Management Plan” (for details, see Chapter 2, Section 4).

Toward the full-scale enforcement of the new system (June 6, 2025), the procedures for preparation for smooth transition to the new system (hereinafter “Preparatory Actions”) were started on October 1, 2023. During the Preparatory Actions, while NRA continues the review of applications for approval for extension of operational period and applications for approval of changes in operational safety programs concerning technical assessment of aging management, the NRA is reviewing applications for approval for the long-term facility management plan associated with the shift to the new system, and the department in charge of aging review, which was newly established, is in charge of these reviews. In addition, with regard to the way to proceed with the review of application for approval for long-term facility management plan, the 42nd FY2023 NRA Commission Meeting (November 8, 2023) determined the policy to strive for reasonable review by making use of confirmation contents of assessment of aging technologies and approval for extension of operational period of the existing systems that have already been confirmed by the NRA Commission.

In FY 2024, the NRA approved the review of application for approval for extension of operational period (including the review of application for approval of changes in operational safety program concerning evaluation on assumption of operation) of Units 3 and 4 of Takahama PS of Kansai Electric Power Co., Inc. in accordance with the conventional system on May 29, 2024.

In FY 2024, the NRA approved the review of application for approval of changes in operational safety program concerning evaluation on assumption of operation of Shimane NPS Unit 2 of Chugoku Electric Power Co. on April 24, 2024, Units 3 and 4 of Takahama PS of Kansai Electric Power Co., Inc. on May 29, 2024, and Unit 3 of Ikata NPS of Shikoku Electric Power Co., Inc. and Unit 1 of Takahama PS of Kansai Electric Power Co., Inc. on October 16, 2024.

The statuses of review and approval of applications for approval of long-term facility management plan related to the Preparatory Actions are as shown in Table 2-3, and the review is ongoing.

Table 2-3 Status of review of applications for approval of long-term facility management plan

Applicant	Targeted Power Reactor	Age* ¹	Application Date	Disposition date
Kansai Electric Power Co., Inc.	Ohi NPS Units 3, 4	Units 3: 33 years Units 4: 32 years	December 21, 2023	June 26, 2024
Kyushu Electric Power Co., Inc.	Sendai NPS Units 1, 2	Units 1: 40 years Units 2: 39 years	June 24, 2024	November 29, 2024
Tohoku Electric Power Co., Inc.	Onagawa NPS Units 2* ²	29 years	June 27, 2024	
Kansai Electric Power Co., Inc.	Takahama PS Units 2	49 years	July 19, 2024	December 16, 2024
Chugoku Electric Power Co., Inc.	Shimane NPS Units 2	36 years	July 30, 2024	
Kansai Electric Power Co., Inc.	Takahama PS Units 3, 4	Units 3: 40 years Units 4: 40 years	August 20, 2024	January 17, 2025
Kyushu Electric Power Co., Inc.	Genkai NPS Units 3	31 years	August 30, 2024	March 5, 2025
Kansai Electric Power Co., Inc.	Mihama NPS Units 3	48 years	October 15, 2024	March 27, 2025
Kansai Electric Power Co., Inc.	Takahama PS Units 1	50 years	October 24, 2024	March 27, 2025
Shikoku Electric Power Co., Inc.	Ikata NPS Units 3	30 years	October 31, 2024	March 27, 2025
Kansai Electric Power Co., Inc.	Takahama PS Units 2* ³	49 years	December 25, 2024	
Kyushu Electric Power Co., Inc.	Sendai NPS Units 2* ³	39 years	January 31, 2025	

*1: The elapsed years as of the enforcement date (June 6, 2025) of the Act for Partial Revision of the Electricity Business Act and Other Acts for Establishing Electricity Supply Systems for Realizing a Decarbonized Society are shown.

*2: Reactor that was applied for before full implementation of the long-term facility management plan because its age will be 30 years within one year of the date of full implementation.

*3: Reactor that was applied for before full implementation of the long-term facility management plan for the next term with the target period extended because the term of the approved long-term facility management plan is within one year.

: Disposed

(3) Submission for the Evaluation of Safety Improvement

The system for the evaluation of safety improvement is a system under which the installer of nuclear reactors for power generation conducts a comprehensive evaluation of the safety of the reactors, thereby simultaneously evaluating its safety and notifying the NRA of the results of the evaluation.

In FY 2024, the NRA received notifications on the evaluation for safety improvement of Ohi NPS Unit 4 (June 13, 2024) and Unit 3 (June 20, 2024) of Kansai Electric Power Co., Inc., Takahama PS Unit 3 (August 22, 2024) and Unit 4 (August 28, 2024) of Kansai Electric Power Co., Inc., Genkai NPS Unit 3 of Kyushu Electric Power Co., Inc. (August 29, 2024), Mihama NPS Unit 3 of Kansai Electric Power Co., Inc. (September 4, 2024), Genkai NPS Unit 4 of Kyushu Electric Power Co., Inc. (January 10, 2025), and Sendai NPS Unit 1 of Kyushu Electric Power Co., Inc. (March 28, 2025), and confirmed the contents of the notifications in accordance with the Operational Guide for Safety Improvement Evaluation of Commercial Power Reactors.

2. Status of Review on Type Certification, etc. of Specified Equipment Design related to Nuclear Power Reactor Facilities

The type certification system for type certification is a system that allows partial omission of the permission review and approval in case of installation of the general-purpose equipment by confirming standards for the design of such equipment are confirmed to.

(1) Specific Dual-use Casks

In FY 2024, concerning the type certification of specific dual-use casks that can be used for both transportation and storage of spent fuel, the NRA has reviewed the type certificate of the cask from Gesellschaft für Nuklear-Service mbH. The NRA has also reviewed the type designation of the cask for PWR and BWR from Kanadevia Corporation and the cask for BWR from Hitachi GE Nuclear Energy, Ltd.

(2) Fuel Assemblies

In FY 2024, concerning the type certification of fuel assemblies from Global Nuclear Fuel - Japan Co, Ltd., the NRA has reviewed the type certificate of 10x10 fuel for BWR.

3. Status of Reviews of Nuclear Fuel Cycle Facilities, etc

(1) Review Meeting on Conformity to the New Regulatory Requirements

After the new regulatory requirements came into force on December 18, 2013, the

NRA has been reviewing the application for permission to change facility operations in nuclear fuel cycle facilities and other centers regarding compliance with the new regulatory requirements in accordance with "Conducting Conformity Reviews of Nuclear Fuel Cycle Facilities, etc. after the Enactment of New Regulatory Requirements" (decided at the 37th FY2013 NRA Commission Meeting (December 25, 2013), partially revised on June 1, 2016), and review meetings were held 29 times in FY 2024.

In addition, the NRA compiled reports showing the overall progress of licensing review of conformity to the new regulatory requirements once every 6 months in order to organize the status of review on various nuclear fuel cycle facilities and other centers as well as to ensure the transparency and predictability of the review, and published them on the NRA website.

As for the permission to change facility operations, 9 operators have submitted applications for the permission to change facility operations at 21 facilities so far, and the NRA granted the permission to 20 facilities of 8 operators by FY 2024, and is reviewing the remaining applications in accordance with the above-mentioned policy.

Concerning design and construction plans, the NRA approved the ninth divided application (nine divided applications in total) of radioactive waste disposal facility of Nuclear Science Research Institute of JAEA on December 5, 2024, the fifth divided application (five divided applications in total) of the Waste storage facility of the Oarai Nuclear Engineering Institute on February 12, 2025, and the fifth divided application (eight divided applications in total) of the fabrication facility of Tokai Works of Nuclear Fuel Industries, Ltd. on March 19, 2025. (see 3. (2) in Section 1 for the status of review of Reprocessing Plant and MOX Fuel Fabrication Plant of Japan Nuclear Fuel Limited).

Concerning the changes in operational safety program related to organizational reform of Japan Atomic Energy Agency, an opinion exchange meeting between the NRA and the president of Japan Atomic Energy Agency, etc. was held in FY 2023, and Japan Atomic Energy Agency expressed its intention to revise such organizations that are not engaged in security activities and do not require change approval, etc. on April 1, 2024 and such organizations that are related to the security activities within FY 2024 after receiving change approval, etc. After that, the NRA reviewed the results of the review of application for approval of changes in the safety program related to organization reform at the 25th FY 2024 NRA Commission Meeting (August 21, 2024) and approved changes to 15 safety programs on October 1, 2024.

Concerning incorporation of the standard response spectrum into regulations, by FY 2024, the NRA has approved six applications for permission for change of reactor installation (approved) or for permission to change facility operations (the High

Temperature Engineering Test Reactor (HTTR) at the Oarai Research & Development Institute (North District), Kyoto University Research Reactor (KUR), the Recyclable-Fuel Storage Center of used fuel storage facility of Recyclable-Fuel Storage Co., and the Reprocessing Plant, MOX Fuel Fabrication Plant, and waste storage facility of Japan Nuclear Fuel Limited), and changes in the design and construction plan of the used fuel storage facility of Recyclable-Fuel Storage Co. In FY 2024, the NRA has accepted the application for approval of the design and construction plan of a High Temperature Engineering Test Reactor (HTTR) at the Oarai Research & Development Institute of the JAEA (North District), and is reviewing it.

(2) Status of Review of Reprocessing Plant and MOX Fuel Fabrication Plants of Japan Nuclear Fuel Limited

The NRA is reviewing applications for approval of changes to the design and construction plans of Reprocessing Plants at JNFL's Reprocessing Plant based on "Conducting Review of Approval of Design and Construction Plans, and Checking of Pre-Service Operator Inspections, relating to Reprocessing Plant of Japan Nuclear Fuel Limited," which was accepted at the 12th FY2020 NRA Commission Meeting (June 24, 2020). The first application (1 out of 5 applications in total) was approved on December 21, 2022. Currently, the second round of applications (4 out of 5 applications) was received on December 26, 2022 and is being reviewed. Concerning the applications for approval of design and construction plans of the MOX Fuel Fabrication Plant at JNFL's Reprocessing Plant, the NRA approved the first application (1st out of 7 applications in total) on September 14, 2022 and the second application (2nd out of 7 applications in total) on March 25, 2025.

In FY 2024, the NRA finished confirmation of the input ground motions of seismic design of Reprocessing Plant, almost finished the confirmation of the analysis model, etc., and is confirming the results of the designs of the representative building and representative facility. Concerning the conformity to standards other than the seismic design standards, the NRA finished confirmation of the facility evaluation method, etc. concerning the measures against major severe accidents, and is going to proceed with confirmation of specific design results from now. The NRA is also systematically proceeding with confirmation of the evaluation method, etc. concerning individual facilities including tornado protection facilities. In the review meeting concerning the Reprocessing Plant and MOX Fuel Fabrication Plant of JNFL, the NRA is making efforts to steadily proceed with the review by documenting the issues pointed out by the NRA Secretariat and sharing understanding from the meeting in October 2023.

(3) Status of Review for the Approval of Package Design, Approval of Packaging and Type Certificate for Specified Container for Spent Fuel Storage Facilities

Regarding applications for the Approval of Package Design, Approval of Packaging and Type Certificate for Specified Container for Spent Fuel Storage Facilities, the NRA reviewed them at the “review meeting on packaging and specified container for spent fuel storage facilities.” The meeting was held twice in 2024. The NRA approved 16 package designs, 8 types of packaging based on approved package design and 1 type certificate for specified container for spent fuel storage facilities.

(4) Submission for the Evaluation of Safety Improvement

The system for evaluating safety improvement is a system under which the licensees of fuel fabrication activity and reprocessing activity conduct a comprehensive evaluation of facility by themselves, thereby simultaneously evaluating its safety and notifying the NRA of the results of the evaluation.

In FY 2024, the NRA accepted the notifications on the safety improvement evaluation of the uranium enrichment of Japan Nuclear Fuel Limited (September 27, 2024) and the fuel fabrication plant of Mitsubishi Nuclear Fuel Co., Ltd. (February 27, 2025), and examined the details of the notifications in accordance with the Operational Guide for Safety Improvement Evaluation of Fuel Fabrication and Reprocessing Facilities.

Table 2-4 Status of Licensing Review of Conformity on New Regulatory Requirements and Inspections of Nuclear Fuel Cycle Facilities, etc.

○Nuclear Fuel Cycle Facility

No.	Applicant	Facility	New Regulatory Requirements Conformity Review			Pre-service check ^{*4}
			Permission of Change in Basic Design/ Facility Operation	Approval of Design and Construction Plans	Approval of Operational Safety Program	
1	Japan Nuclear Fuel Ltd.	Reprocessing plant	Completed	Under review	Not applied	Under inspection
2		MOX fuel fabrication plant	Completed	Under review	Not applied	Under inspection
3		Uranium enrichment plant	Completed	Completed	Completed	Completed
4		Waste storage facility	Completed	Under review	Not applied	
5		Waste disposal facility ^{*5}	Completed		Completed	
6	Recyclable-Fuel Storage Company	Spent fuel storage facility	Completed	Completed	Completed	Completed
7	Mitsubishi Nuclear Fuel	Uranium fuel fabrication facility	Completed	Completed	Completed	Completed
8	Japan Atomic Energy Agency	Waste storage facility	Completed	Completed	Under review	Under inspection
9		Research reactor facility (JRR-3)	Completed	Completed	Completed	Completed
10		Research reactor facility (HTTR)	Completed	Completed	Completed	Completed
11		Research reactor facility (Common radioactive waste disposal facility)	Completed	Completed	Not applied	Under inspection
12		Research reactor facility (NSRR)	Completed	Completed	Completed	Completed
13		Research reactor facility (STACY)	Completed	Completed	Completed	Completed
14		Research reactor facility (Joyo)	Completed	Under review	Under review	Under inspection
15	Nuclear Fuel Industries, Ltd.	Uranium fuel fabrication (Tokai Works)	Completed	Under review	Not applied	Under inspection
16		Uranium fuel fabrication (Kumatori Works)	Completed	Completed	Completed	Completed
17	Global Nuclear Fuel Japan Co., Ltd.	Uranium fuel fabrication facility	Completed	Under review	Not applied	Under inspection
18	Kyoto University	Research reactor facility (KUR)	Completed	Completed	Completed	Completed
19		Research reactor facility (KUCA)	Completed	Completed	Completed	Completed
20	Kindai University	Research reactor facility (Kinki University Nuclear Reactor)	Completed	Completed	Completed	Completed
21	Japan Atomic Power Company	Category 2 waste disposal facility (trench disposal)	Under review		Not applied	

(Note) Excluding facilities whose decommissioning plan was approved and ones for which their operators publicized their decommission.

- *1) This shall not preclude implementation of activities other than “those that greatly increase facility risk or that reduce facility risk” only for five years.
(Refer to “Policies on the Application of New Regulatory Requirements to Nuclear Fuel Cycle Facilities” enacted by the NRA Secretariat on November 6, 2013).
- *2) Regarding phased applications for permission to change design and construction plans, the review shall continue until the final application is approved.
- *3) Regarding the review of permission to change operational safety programs, no application is assumed to be filed when only a part of an application is submitted.
- *4) Including pre-service inspections pursuant to Article 7-1 of Supplementary Provisions of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors for Strengthening Safety Measures in the Use of Nuclear Power (Act No.15 of 2017)
- *5) Waste burial is underway at facilities that have completed the confirmation of waste disposal stipulated in Article 51-6, item 1 of the Reactor Regulation Act.

In this table, the following facility names are expressed as strings in the corresponding parentheses. The enrichment and disposal sites of Japan Nuclear Fuel Limited (Uranium enrichment facility), the recyclable fuel storage center of Recyclable-Fuel Storage Company (Spent fuel storage facility).

■: Nuclear power stations whose status changed in FY 2024.

4. Actions related to Decommissioning

(1) Commercial Power Reactors

In general, in the decommissioning of a commercial power reactor, a plan for each stage is applied for by operators in order because the final dismantling of the facility takes a long time after reactor functions are stopped, the fuel assemblies and other materials are removed and carried out, the system is isolated and the facility is sealed, and safe storage is performed to ensure temporal decay of the remaining radioactivity in the reactor facility. Since the establishment of the NRA in 2012, the NRA has accepted decommissioning plans from 18 plants and approved all of them.

In FY 2024, the NRA accepted applications for approval of changes in decommissioning plan of Units 1 to 4 of TEPCO's Fukushima Daiichi NPS on April 5, 2024, Genkai NPS Units 1 and 2 of Kyushu Electric Power Co., Inc. on January 29, 2025, and Onagawa NPS Unit 1 of Tohoku Electric Power Co., Inc. on March 28, 2025, and is reviewing those applications. The NRA also approved Shimane NPS Unit 1 of Chugoku Electric Power Co. on May 17, 2024 and the Units 1 and 2 of Hamaoka NPS of Chubu Electric Power Co., Inc. on December 18, 2024.

(2) Prototype Fast Breeder Reactor MONJU of the JAEA

In order to continuously confirm the current status of JAEA's Prototype Fast Breeder Reactor MONJU (hereinafter "MONJU") and the status of JAEA's efforts to ensure safety for decommissioning, the NRA held the "Safety Oversight Team for Prototype Fast Breeder Reactor MONJU Decommission Meeting" five times in total in FY 2024.

From 2023, the work was shifted to the second phase of decommissioning as the preparatory period for dismantlement. As the first half of the second phase of the decommission, the JAEA commenced the removal work of all 599 shielding bodies placed at the reactor core. and undertook dismantlement of water-based system/steam system power-generating equipment and other things. Regarding removal work of shielding bodies, etc., the transfer work from the reactor core, etc. to the fuel pond commenced on June 2, 2023, but on October 25 of the same year, the door valve of the fuel charging/discharging machine failed to close due to the fuel transfer pot being transferred into the fuel cleaning facility along with the surveillance assembly model II, thereby interrupting the transfer work. The fuel transfer pot, etc. were eventually restored to their normal condition and recurrence prevention measures were taken, and transfer work was resumed on October 11, 2024. As of the end of March 2025, the transfer of 205 shielding bodies has been completed.

On October 11, 2024, the NRA accepted the application for approval of changes in the decommissioning plan related to the extraction and carrying-out of non-radioactive

bulk sodium that is planned to be conducted in the future and dismantlement, removal, etc. of the sodium facility, and approved the application on March 18, 2025.

On October 29, 2024, the Geospatial Information Authority of Japan published “Imajo,” a fault map covering parts of Fukui Prefecture and Shiga Prefecture, and newly showed the existence of active faults passing under the MONJU site (presumed active fault (ground surface) (location vaguely known)). Following the announcement of this active fault, the NRA discussed actions to be taken in the future at the 41st FY 2024 NRA Commission Meeting (November 6, 2024), and concluded that it was not necessary to instruct the JAEA to conduct additional investigation on the active fault, evaluation of the plant, and others because considering the evaluation of the MONJU decommissioning plan and the current situation, the risk posed by MOJU is considerably low.

(3) Tokai Reprocessing Plant of the JAEA

To periodically confirm the status of implementation of vitrification for risk reduction at JAEA's Tokai Reprocessing Plant, its safety, how the safety is ensured for decommissioning, and other matters, the NRA held the "Tokai Reprocessing Facility Safety Oversight Team Meeting" (hereinafter Tokai Reprocessing Facility Oversight Team Meeting”) six times in FY 2024.

Concerning the decommissioning of JAEA's Tokai Reprocessing Plant, it is necessary to proceed with safety measures for its high radioactivity liquid waste (hereinafter "safety measures" in (i) below), vitrification, and other works with the highest priority put on the reduction of the risk of radioactive liquid waste, etc. stored at the plant for the time being. Therefore, the NRA conducted oversight and others as follows.

(i) Status of Implementation of Safety Measures, etc

The JAEA submitted applications for approval of change in the decommissioning plan for formulating safety measures five times from December 19, 2019 to September 30, 2021, and all of the applications were approved by March 3, 2022. Based on the decommissioning plan, the JAEA determined to proceed with safety measures with the highest priority put on the high-activity liquid waste storage facility (HAW) and the Tokai Vitrification Facility (TVF), and had almost completed the construction for safety measures including initiatives against earthquakes and tsunamis, such as ground improvement and installation of tsunami debris protection fences, by the end of FY 2023. The JAEA completed some undone safety measure constructions including measures against tornados at the end of FY 2024.

(ii) Status of Vitrification

In the initial approval of the decommissioning plan granted on June 13, 2018, the JAEA planned to produce 571 vitrified canisters by FY 2028.

As the operation status of vitrification, 45 vitrified canisters in total have been produced since the permission of the decommissioning plan by FY 2022.

At the oversight team meeting held on September 6, 2022, the JAEA explained that, based on the results of the shutdown of vitrification at this time, the JAEA would consider suspension of the use of the No. 2 melter, and replacement with the No.3 melter ahead of schedule, aiming at commencement of operation at the end of FY2024.

Regarding the No. 3 melter, the JAEA implemented the glass cullet test from March 6 to April 11, 2023, confirmed basic performance, implemented the test using simulated liquid waste to confirm operation conditions from November 1, 2023 to January 12, 2024, and confirmed operation parameters, etc. In the Tokai Reprocessing Facility Oversight Team Meetings held on March 25 and December 2, 2024, the NRA received an explanation on the result of discussion of some items including review of the management index.

At the Meetings of Tokai Reprocessing Oversight Team held on December 20, 2023 and March 25, 2024, the JAEA indicated the prospects that the operation of No.3 melter will be started in the first quarter of FY2026. based on the status of inspection and maintenance of the bilateral arm type manipulator within solidification cell and decommission work, etc., and explained that the original FY2028 plan to complete the production of vitrification will be reconsidered to be completed by FY2038. After that, as an abnormality with the sequencer of vitrified canister handling operation panel occurred, it became necessary to replace the sequencer. In the Tokai Reprocessing Facility Oversight Team Meeting held on August 19, 2024, the NRA received an explanation to the effect that the operation start of the No. 3 melter would be delayed to the third quarter of FY 2026. In the Tokai Reprocessing Facility Oversight Team Meeting held on March 3, 2025, the NRA received an explanation to the effect that the renewal work of the power manipulator in the dismantlement shop was interrupted due to a contact defect of the connector of the travel drive motor unit of the solidification cell crane, but as it was restored through cleaning of the electrode contact surface, the No. 3 melter renewal schedule would not be affected. JAEA said that the plan to complete the vitrification process by FY 2038 would not be affected, and the Tokai Reprocessing Facility Oversight Team will continue to confirm the status of the renewal work conducted on No.3 melter and vitrification.

(iii) Status of Other Decommissionings

As the process cleaning that collects and stabilizes collectible nuclear fuel materials in the process (sheared chips, uranium-plutonium solution) was completed on February 5, 2024, the JAEA submitted an application for approval of changes in the decommissioning plan, to which the plan, etc. of system decontamination to be conducted before the start of machine dismantlement is reflected, on May 13, 2024, and the NRA is proceeding with its review.

(4) JAEA Back-End Measures by JAEA

In order to handle comprehensive challenges concerning back-end measures throughout JAEA, including decommissioning of aging nuclear facilities of JAEA and management of radioactive waste, meetings of the “JAEA Back-End Measures Oversight Team” (hereinafter “Back-End Measures Oversight Team Meeting”) were held twice in total in FY 2024.

The JAEA conducted an appearance inspection of drums that had been directly stacked and stored in the facility in an underground pit structure in storage facility L of the radioactive waste storage/disposal facility of Nuclear Science Research Institute since FY 2008, and found that rust had propagated in some drum containers and decided to conduct an integrity confirmation. Therefore, the NRA confirmed the issues, etc. concerning the integrity confirmation work through the Back-End Measures Oversight Team Meeting, etc.

At the Back-End Measures Oversight Team Meeting held on February 13, 2025, the NRA received an explanation to the effect that in the integrity confirmations conducted from 2019 to 2023, there had been no leakage of waste from drums and drum surfaces had been free from contamination, repaired all drums on which rust had been confirmed or had their contents moved to other drums, and restored those drums in a storage/disposal facility in an underground pit structure or of a warehouse type. In addition, the NRA received an explanation on the plan and policy of the back-end measures by JAEA and the decommissioning implementation status and measures against waste, and is going to check the back-end measures by the whole JAEA in the Back-End Measures Oversight Team Meetings.

(5) Research and test reactor

Concerning the Fast Critical Assembly (FCA) of the JAEA, as it was determined that low-enriched uranium fuel would be transferred to the United States Department of Energy, an application for approval of change of installation was submitted on March 4, 2024. The NRA approved said application for approval of the change in basic design on

September 18, 2024.

Section 2. Implementation of inspections based on the Reactor Regulation Act

1. Implementation of Nuclear Regulatory Inspections of Commercial Power Reactors and Nuclear Fuel Cycle Facilities, etc.

(1) Status of Inspections

In order to ensure the safety of commercial power reactors and nuclear fuel cycle facilities, the NRA conducts nuclear regulatory inspections based on the Reactor Regulation Act. In this inspection system, the NRA conducts the baseline inspections consisting of routine inspections (mainly conducted by inspectors stationed at the NRA Regional Offices) and team inspections (mainly conducted by inspectors with expertise at the NRA headquarters) through active communications with operators and also conducts supplemental inspections and special inspections as necessary. In FY 2024, as a part of legal requirements, the NRA confirmed 115 cases of ‘appropriateness of licensees’ activities related to pre-operator inspections, waste disposal facilities, waste packages, vehicle transportation, decommissioning and radioactivity concentration by utilizing the results of nuclear regulatory inspections.

In addition, the NRA conducted 11 pre-service inspections in accordance with the transitional measures stipulated in Article 7 of the Supplementary Provisions of the Act partially amending the Reactor Regulation Act (Act No. 15 of 2017) in FY 2024.

Furthermore, operators are supposed to report the safety performance indicator that indicates their performance concerning safety activities of nuclear power facilities (the indicator for appropriately identifying signs of deterioration of the operators’ activities such as the number of unscheduled shutdowns of nuclear reactors and the number of failures of safety system facilities; hereinafter “PI”). In cases where the inspection findings are found or where PI value exceeds the designated threshold value, the NRA is going to evaluate the status of deterioration of the operator’s activities (classification by color (green, white, yellow and red) for commercial power reactor, whether the operator took additional action or not for the nuclear fuel cycle facility, etc.). In FY 2024, there was no such PI reported to the NRA that required changes in the Action Category.

(i) Comprehensive Assessment of Inspection Results for FY 2023 and Inspection Plans for FY 2024

Concerning the nuclear regulatory inspections conducted in the fourth quarter of FY 2023, the NRA confirmed 13 findings reported at the 7th FY 2024 NRA Commission Meeting (May 15, 2024) and 8th FY 2024 NRA Commission Meeting (May 15, 2024) and received a report saying that the safety significance level of all the findings was

"green." As a result, a total of 29 inspection findings were identified in the nuclear regulatory inspections in FY 2023, and their severity and significance levels were rated as "green" ("no additional action" for nuclear fuel cycle facilities) and "SL IV." In addition to the above, there was one case for which significance evaluation only was conducted (green) and one case for which severity evaluation only was conducted (SLIV).

In light of this, at the 11th FY 2024 NRA Commission Meeting (May 29, 2024), the comprehensive assessment for FY 2023 and the inspection plans for FY 2024 were approved. For nuclear facilities other than Takahama PS Unit 3 of Kansai Electric Power Co., Inc. and TEPCO's Kashiwazaki-Kariwa NPS, the safety performance indicator is "green" (or no additional action) and since there were no inspection findings during the nuclear regulatory inspections, or the significance and severity levels of the inspection findings found during the nuclear regulatory inspections were all "green (or no additional action), SL IV", the Action Category was the first category throughout the year. It means that the facility condition is expected to improve autonomously by its licensee, and a regular baseline inspection will be continued in FY 2024 as the first category.

For Takahama PS Unit 3 of Kansai Electric Power Co., Inc., the inspection findings were confirmed, but the significance level and severity level were rated "green" and "SLIV," respectively. After reception of the 1st quarter operation report from Kansai Electric Power Co., Inc. on August 9, 2023, because there have been four cases of deviation from the operational restrictions of facilities for severe accident management in the past four quarters, there has only been one "white" case concerning the PI of Unit 3. In response to this, based on Implementation Guide for Nuclear Regulatory Inspections, etc., the 27th FY 2023 NRA Commission Meeting (August 23, 2023) approved the change in the Action matrix of Takahama PS Unit 3 to Category 2 from April 1, 2023, decided the contents of the notification concerning implementation of supplemental inspections and issued it to Kansai Electric Power Co., Inc. After receiving the report on a detailed factual investigation for identification of root causes and plans of action for remedial measures requested in the above-mentioned notification as of November 30, 2023, establishing the plans for supplemental inspections based on these contents and notifying Kansai Electric Power Co., Inc. as of December 25 of the same year, the NRA conducted supplemental inspections for Unit 3 of Takahama PS. As the NRA confirmed in the supplemental investigation that cause investigation and drafting of improvement measures concerning the above-mentioned deviations from the operational restriction have been appropriately implemented, the NRA, having evaluated on March 27, 2024 that autonomous improvement is expected to be made

even when performance has degraded, determined to return the action matrix to Category 1 and then conduct normal basic inspections in FY 2024.

For TEPCO's Kashiwazaki-Kariwa NPS, in FY2022 the inspection findings were confirmed, but the significance level and severity level were rated "green, SL IV", and the safety performance indicator was "green" for the entire year. As the action matrix of this power plant was set to Category 4 in FY 2020 because it was confirmed that there had been long-standing or serious degradation in the safety activities in the plant, the NRA has continued supplemental inspections since then. In the supplemental inspections that have been conducted up until December 2023, the NRA finished all confirmations of the improvement measure activities by TEPCO and judged that the safety activities have been improved. Based on the results of these additional inspections and the results of on-site investigation and opinion exchanges with the president of TEPCO, the NRA confirmed on December 27, 2023 that the safety activities had been improved and autonomous improvement by TEPCO would be expected in the future, and then determined to change the action matrix from Category 4 to Category 1 and conduct normal basic inspections after setting priority items in FY 2024.

(ii) Baseline Inspection Results in FY 2024

The NRA received reports on the basic inspections in the first to third quarters in FY 2024 at the 25th FY 2024 NRA Commission Meeting (August 21, 2024), 26th FY 2024 NRA Commission Meeting (August 21, 2024), 45th FY 2024 NRA Commission Meeting (November 27, 2024), 46th FY 2024 NRA Commission Meeting (November 27, 2024), 63rd FY 2024 NRA Commission Meeting (February 19, 2025), and 64th FY 2024 NRA Commission Meeting (February 19, 2025).

(iii) Pre-service Confirmation for Recyclable Fuel Storage Center, Recyclable-Fuel Storage Company

Upon receipt of an application for pre- service confirmation concerning the Recyclable Fuel Storage Center from the Recyclable-Fuel Storage Company (referred to as “operator” in this paragraph) on February 10, 2022, the NRA issued the pre- service confirmation certificate on the same day. This was based on confirmation at the 41st FY 2024 NRA Commission Meeting (November 6, 2024) that a nuclear regulatory inspection had confirmed that the operator’s pre- service inspection had been appropriately conducted , the construction had been conducted in accordance with the approval of design and construction plan, and the construction had complied with the technical standards.

2. Confirmation of Causes and Preventive Measures for Problems in Nuclear Facilities

The nuclear operators, etc. are obliged to make a report (hereinafter “legally obligated report”) to the NRA in the event of an accident, failure, etc. stipulated in the NRA Ordinance in accordance with Article 62-3 of the Reactor Regulation Act. In FY 2024, there was one incident reported based on the Act for commercial power reactors. The NRA received reports on these incidents from the operators and confirmed that the investigations into the causes and preventive measures were taken by the operators.

Additionally, incidents reported based on the Act are subject to evaluations according to the International Nuclear and Radiological Event Scale (INES³⁵). The incident that occurred at Mihama NPS of Kansai Electric Power Co., Inc. on October 10, 2024 was rated as level 0. In addition, all three incidents that occurred at Mihama NPS in FY 2023 and were rated as level 0 (incident with no safety significance).

(1) Response to Accidents and Failures in FY 2024

(i) Micropores and Thinning Observed in Primary Cooling Water Cooler Seawater System Piping at Unit 3 of Mihama PS of Kansai Electric Power Co., Inc.

On October 5, 2024, during patrol inspection, an operator observed precipitation of salt on the seawater system return pipe of the C-1 system cooling water cooler (hereinafter “CCW³⁶ cooler”) in Unit 3 of Mihama PS of Kansai Electric Power Co., Inc. during its operation at constant rated thermal power. Kansai Electric Power Co., Inc. conducted detailed inspection of the area around the salt precipitation by measuring the pipe thickness and found that there were two micropores and the area around them had been thinned to the degree that it did not satisfy the required minimum thickness. For this reason, the NRA received a report to the effect that the found defects corresponded to incidents reported based on the Act on October 10, 2024.

At the 38th FY 2024 NRA Commission Meeting (October 16, 2024), the NRA approved the intention of Kansai Electric Power Co., Inc. that it would respond by means of the response policy B³⁷ in accordance with the “Manual for Response to Incidents Reported based on the Reactor Regulation Act” (hereinafter “Response Manual”).

As of November 14, 2024, Kansai Electric Power Co., Inc. had submitted a report on

³⁵ The International Nuclear and Radiological Event Scale

³⁶ component cooling water

³⁷ This will be reported to the NRA as one of findings at the time of nuclear regulatory inspection quarterly report.

the cause of the event and the countermeasures to be taken. In this report, Kansai Electric Power Co., Inc. presumed that the piping that had been repaired with epoxy resin lining that is not effective to erosion caused by cavitation, erosion due to cavitation associated with the shrinking of flow path of the C-CCW cooler seawater outlet valve (butterfly valve) had occurred, partial peeling off of the lining and thinning of base material had progressed, and local corrosion had led to the penetration.

Subsequently, at the 63rd FY 2024 NRA Commission Meeting (February 19, 2025), as a result of evaluation of the legally obligated report (the response policy B) in accordance with the Reactor Regulation Act, the NRA received a report from the NRA Secretariat in which the cause, countermeasures, etc. reported by Kansai Electric Power Co., Inc. were confirmed.

(2) Response to Accidents and Failures in FY 2023

(i) Wear on Steam Generator Tubes of Unit 3 of Takahama PS of Kansai Electric Power Co., Inc.

On October 17, 2023 Kansai Electric Power Co., Inc. reported to the NRA that when eddy current testing (ECT³⁸) was conducted to confirm the integrity of heat transfer tubes in three steam generators (SGs³⁹) at Unit 3 of Takahama PS, which has had periodic outages, significant signal indications (one showing scratches of the inner surface and one showing wall thinning of the outer surface) were observed in two tubes of two of the three SGs in total, and this corresponds to incidents reported based on the Act. At the 39th FY 2023 NRA Commission Meeting (October 25, 2023), the NRA approved the intention of Kansai Electric Power Co., Inc. that it would respond to the incident by means of the response policy C⁴⁰ in accordance with the Response Manual.

As of November 9, 2023, Kansai Electric Power Co., Inc. submitted a report on the cause of the event and countermeasures to be taken. In the said report, Kansai Electric Power Co., Inc. attributed the scratches on the inner surface to stress corrosion cracking in the primary coolant due to a combination of localized tensile residual stress on the inner surface of the heat transfer tubes during SG manufacturing, internal pressure during operation and the high temperature primary coolant environment. Additionally, Kansai Electric Power Co., Inc. also reported thinning of the outer surface due to abrasion caused by the dense scale that remained after chemical cleaning during the previous periodic inspection and remained near the tube support plate during plant

³⁸ Eddy Current Testing

³⁹ Steam Generator

⁴⁰ Policy on nuclear regulatory body's response to incidents reported based on the Act in which the regulatory body's special involvement in the cause investigation, recurrence prevention measures, etc. conducted by the operator, etc. is not considered to be necessary

operation and repeatedly contacted the vibrating heat transfer tubes.

Subsequently, at the 7th FY 2024 NRA Commission Meeting (May 15, 2024), as the result of evaluation of the legally obligated report (response policy C) in accordance with the Reactor Regulation Act, the NRA received a report from the NRA Secretariat in which the cause, countermeasures, etc. reported by Kansai Electric Power Co., Inc. were confirmed.

(ii) Wear on Steam Generator Tubes of Unit 4 of Takahama PS of Kansai Electric Power Co., Inc.

On January 22, 2024, Kansai Electric Power Co., Inc. reported to the NRA that when ECT was conducted to confirm the integrity of heat transfer tubes in three SGs at Unit 4 of Takahama PS, which has had periodic outages, significant signal indications (four showing wall thinning of the outer surface) were observed in 4 tubes of two of three SGs in total, and this corresponds to incidents reported based on the Act. At the 60th FY 2023 NRA Commission Meeting (January 24, 2024), the NRA approved the intention of Kansai Electric Power Co., Inc. that it would respond to the incident by means of the response policy C in accordance with the Response Manual.

As of February 22, 2024, Kansai Electric Power Co., Inc. had submitted a report on the cause of the event and the countermeasures to be taken. In the said report, Kansai Electric Power Co., Inc. attributed the thinning of the outer surface to abrasion caused by the dense scale that remained after the chemical cleaning during the previous periodic inspection and remained near the tube support plate during plant operation and repeatedly contacted the vibrating heat transfer tubes. Subsequently, as with 2. (2)(i) in Section 2, the NRA received a report from the NRA Secretariat in which the cause, countermeasures, etc. reported by Kansai Electric Power Co., Inc. were confirmed at the 7th FY 2024 NRA Commission Meeting (May 15, 2024).

(iii) Steam Leakage from Inlet Pipe of B-1 Feed Water Booster Pump of Unit 1 of Takahama PS of Kansai Electric Power Co., Inc.

On January 22, 2024, as the NRA received a report from Kansai Electric Power Co., Inc. that steam leakage from the cooling water of the secondary system and increased water leakage from the gland part of the Feed Water Booster Pump were identified in Unit 1 of Takahama PS which was operating at constant rated thermal power. As a result of lowering the power generation output and implementing penetrant testing for the piping, it was reported that, as indications to show the existence of scratches, this corresponds to incidents reported based on the Act on January 24, 2024. At the 62nd FY 2023 NRA Commission Meeting (January 31, 2024), the NRA approved the intention of

Kansai Electric Power Co., Inc. that it would respond to the incident by means of the response policy B in accordance with the Response Manual.

As of February 6, 2024, Kansai Electric Power Co., Inc. had submitted a report on the cause of the event and the countermeasures to be taken. In the said report, Kansai Electric Power Co., Inc. stated that the steam leakage was caused as follows: the base of the top of the vent pipe of the piping and the upper part of the piping made contact due to thermal expansion of the feed water pipe which was heated up to a high temperature by operations, which resulted in a bending force acting on the base portion of the vent pipe. In addition, as the top of the vent pipe was bound, force was caused at the weld toe section of the piping matrix by mechanical vibration due to operation of the said feed water booster pump, causing a crack on the outer surface of the vent pipe, and as the mechanical vibration continued further, crack growth occurred, resulting in leakage due to the crack penetrating into the piping.

Additionally, regarding the gland part of the feed water booster pump, it was reported that there was no abnormal result in the inspection and that the sealing performance of the gland part was sound as the draining amount was reduced due to additional tightening of the nut to hold packing.

Subsequently, at the 7th FY 2024 NRA Commission Meeting (May 15, 2024), the NRA received a report from the NRA Secretariat in which the cause, countermeasures, etc. reported by Kansai Electric Power Co., Inc. were confirmed.

3. Continuous Improvement of Nuclear Regulatory Inspection

The revision of the inspection guides for improvement based on the inspection practices in FY 2023 was approved at the 13th FY 2024 NRA Commission Meeting (June 5, 2024).

In order to continuously improve the nuclear regulatory inspection system, whose operation started in April 2020, the “Information Exchange Meeting on the Inspection Program” was established to exchange opinions with nuclear operators, etc. The meeting was held once in FY 2024 and opinions on the idea about selection of target of pre-use operator inspection (facility), the activities of Japan Nuclear Safety Institute (JANSI), trial operation of engineering inspection (tentative name), safety performance indicator, etc. of facilities for severe accident management, and others were exchanged.

In FY 2024, as efforts to improve and maintain the competence of inspectors, in addition to implementation of training and education necessary for acquisition of inspector qualifications, an inspector exchange program where inspectors from the Nuclear Regulation Offices in charge of non-operating plants were dispatched to Nuclear Regulation Offices in charge of operating plants was implemented. In addition,

information on inspection practices and results was shared through inspectors' counterpart meetings, etc., and management observations were conducted by managers of the NRA Secretariat and others.

Concerning appropriateness confirmation of the operator's Probabilistic Risk Assessment (PRA) model used in nuclear regulatory inspections, at the 32nd FY 2024 NRA Commission Meeting (September 18, 2024), the results of appropriateness confirmation of the level 1 PRA models of Kashiwazaki-Kariwa NPS Unit 7 prepared by its operator were reported to NRA. Also, the operator's responses concerning the items pointed out by the NRA Secretariat in the appropriateness confirmations made so far were reported to the NRA.

Section 3. Promotion of Safety Research and Continuous Improvement of Regulatory Requirements

1. Proactive Study on Safety

(1) Implementation of Safety Research and Publication of Result

Based on the "Basic Policy on Safety Research in the NRA" (decided by the NRA on July 6, 2016) and the "Safety Research Field to be Promoted and its Implementation Policy (For Safety Research in and after FY 2024)" (approved by the NRA on July 12, 2023), the NRA has conducted safety research projects. In FY 2024, 17 safety research projects were conducted in 13 fields, including three new projects (See Table 2-5).

In addition to these, targeted to incorporated administrative agencies and universities, etc. and aiming at establishing technology base to cope with regulatory research subjects in the future (including systems, facilities and human resources) such as fostering abilities to provide proposals for regulatory research subjects in the future and abilities to positively support regulatory activities, the NRA determined to implement "Business to Establish Technology Base for Strengthening of Study on Nuclear Regulation" from FY 2024 and adopted five individual operations (see Table 2-6).

Table 2-5. Safety Research Projects Conducted in FY 2024

No.	Area	Project Name
1	External Events	Study on improvement of reliability of seismic ground motion evaluation method (R6-R10, new)
2		Study on evaluation method of fault activity (R6-R10, new)
3		Research on tsunami evaluation methods and source estimation of past tsunamis (FY2021- FY2024)

4		Research on improvement of fragility evaluation methods for structures, systems and components subjected to external events (FY2021-FY2024)
5	Fire Protection	Research on fire hazard analysis for protection of nuclear power stations (Phase 2) (FY 2021-FY 2024)
6	Risk Assessment	Research on Level 1 PRA for Nuclear Regulatory Inspection (FY 2022-FY 2026)
7	Severe Accident	Research on hydrogen behavior based on severe accident progression (FY 2025-FY 2026)
8		Experimental research to reduce uncertainties for important physicochemical phenomena during severe accidents (FY2020-FY2025)
9	Reactor Physics	Research on best estimate plus uncertainty method on neutronics analysis (FY2021-FY2024)
10	Nuclear Fuel	Research on the behavior of accident tolerant fuels and current commercial fuels under accident conditions (FY2024-FY2028, new)
11	Materials and Structures	Study on verification of evaluation methods of aging degradation using materials and harvested from LWRs (FY2020-FY2024)
12	Specified Nuclear Facility	Development of a database and evaluation methodology for criticality of fuel debris at the Fukushima Daiichi Nuclear Power Station (FY2014-FY2024)
13	Nuclear Fuel Cycle Facility	Study on the event progression of severe accidents at reprocessing facilities and MOX fuel fabrication facilities (FY 2021-FY 2025)
14	Radioactive waste disposal facilities	Research on long-term performance assessment for radioactive waste disposal (FY2021- FY2024)
15	Decommissioning and Clearance	Research on quantitative evaluation techniques for radioactivity concentration of radioactive waste (FY2021-FY2024)
16	Nuclear Disaster Preparedness	Research on the revision of Emergency Action Levels (EAL) considering specific accident response facilities (FY2021-FY2025)

17	Radiation Protection	Research on improving the accuracy of dose and health risk assessment for radiation protection (FY2022-FY2026)

Table 2-6 Individual operations employed in FY 2024 “Operation to Establish Technology Base for Strengthening of Study on Nuclear Regulation”

No.	Implementation organization	Operation name
1	Nagaoka University of Technology	Development of infrastructure on explosion experiment and safety research of combustible gas such as hydrogen
2	JAEA	Establishment operation of comprehensive technological foundation for providing technical support to nuclear regulatory administration on new technologies and new concepts
3	Japan Manned Space Systems	Study on application of safety evaluation method in consideration of resilience to nuclear facilities
4	The University of Tokyo	Study on technological foundation concerning performance evaluation of cured cement that is used for waste disposal facilities for a super-long term exceeding 300 years
5	Institute of Science Tokyo	Establishment of base for study on nuclear fuel waste safety infrastructure

Additionally, the NRA published the results of its research through “NRA Technical Reports,” which are reports that summarize the experimental data, etc. obtained in safety research mainly including safety research projects from the viewpoint of their application to regulations and serve as the basis for decisions in regulatory requirements, various guidelines, reviews, and inspections, “NRA Technical Notes”, which summarize data and information obtained through surveys, academic papers, conference presentations, and other means. In FY 2024, the NRA published an NRA Technical Report that proposes an example judgment method including the sampling method of specimens for radioactivity measurement for the judgment of the contamination condition of site soil, etc. by radioactive substances to be implemented at the time of confirming the completion of nuclear facility decommissioning, an NRA Technical Report that summarizes the standard investigation methods for preventing variation in the results of investigations of aircraft crash accident data, and an NRA Technical Report that summarizes the research results on the explosion phenomenon of High Energy Arcing Fault (HEAF) and the analysis results of the zone of influence of HEAF, which is important

for evaluating the influence on adjacent equipment, and five NRA Technical Notes (see Table 2-7).

Table 2-7 Publication of Safety Research Results (NRA Technical Reports, NRA Technical Notes)

No.	Category	Publication year/month	Report Title
1	NRA Technical Reports	May 2024	Determination Methods of Condition of Soil etc. on Confirmation of Completion of Decommissioning
2		February 2025	Survey Procedures for Data on Aircraft Crashes
3		March 2025	Analysis of High Energy Arcing Fault (HEAF) in Nuclear Power Plants (Second Report)
4	NRA Technical Notes	April 2024	Data on Aircraft Crashes (2002 to 2021)
5		May 2024	Validation of the Standard Response Spectra of Ground Motions Evaluated Without Specifying Seismic Sources —Addition of Observation Records from 2018 to 2022 —
6		September 2024	Validation of the Standard Response Spectra of Ground Motions Evaluated Without Specifying Seismic Sources —Addition of Observation Records from 2018 to 2022 —
7		September 2024	Review of the current status of the development of artificial intelligence and their application in the nuclear field
8		March 2025	Data on Aircraft Crashes (2003 to 2022)

In addition, 16 papers were published, 10 proceedings (peer-reviewed) were published, and 32 presentations were made at academic conferences. Furthermore, as an outreach activity in safety research, in cooperation with the JAEA Nuclear Safety and Emergency Preparedness Institute, two oral presentations and four poster presentations were made by the NRA staff at the joint debriefing session with the Institute.

(2) Participation in Joint Research Activities

The NRA, in cooperation with the JAEA Nuclear Safety and Emergency Preparedness Institute, participates in international joint research projects. In FY 2024, they participated in 15 international joint research projects at OECD/NEA and collected technical knowledge including the latest trends in each research field, trends of regulations in foreign countries, and others. As bilateral international activities, they

exchanged information with the United States Nuclear Regulatory Commission (U.S. NRC) and the French Radioprotection and Nuclear Safety Institute (IRSN).

Additionally, the NRA implemented 10 joint research projects with domestic universities, JAEA, and other organizations based on the joint research implementation rules established on April 21, 2017, and others of which eight have been completed. In addition to two joint research projects that are underway as of the end of 2024, the NRA is planning to implement new nine joint research projects from April 2025.

(3) Evaluation of Safety Research and Formulation of Policies

At the 17th FY 2024 NRA Commission Meeting (June 26, 2024), the NRA approved the post-evaluation of five safety research projects completed in FY 2023 and the mid-term evaluation of two safety research projects to be completed in FY 2026. In addition, at the 51st FY 2024 NRA Commission Meeting (December 25, 2024), the NRA approved the pre-evaluation of 11 safety research projects planned to be started in FY 2025.

Based on the “Basic Policy on Safety Research in the NRA,” the NRA approved the “Safety Research Field to be Promoted in the Future and its Implementation Policy (for Safety Research in and after FY 2025)” at the 18th FY 2024 NRA Commission Meeting (July 3, 2024).

As technological opinion exchanges on safety research and R&D with nuclear operators that were established based on the approval made at the 52nd FY 2023 NRA Commission Meeting (December 13, 2023), in FY 2024, the NRA held one general meeting, four individual theme meetings with the agenda of utilization of risk information, and three individual theme meetings with the agenda of aging deterioration.

2. Accumulation of the Latest Scientific and Technical Knowledge and Findings

(1) Collecting the Latest Scientific and Technical Knowledge and Findings

Secretariat of the NRA performs activities (GENERIC ISSUES Task Force) to identify information that needs to be considered in relation to Japanese regulations and the safety of nuclear facilities after organizing information on regulatory trends in other countries, safety research, international standards, academic societies, etc. based on the process to reflect the latest findings in the regulations approved at the 45th FY 2016 NRA Commission Meeting (November 22, 2016).

In FY 2024, the Secretariat of the NRA reported 13 pieces of the latest technological knowledge after they had been screened by the GENERIC ISSUES Task Force to the Technical Information Committee. Among these, there was no piece corresponding to

technological knowledge for which it was judged necessary to make some regulatory action.

(2) Use of Scientific and Technical Findings from Safety Research in Regulatory Activities

The Research Division of the Secretariat of the NRA implements technical support such as providing information to the Nuclear Regulation Department for the purpose of applying the latest scientific and technical knowledge and findings of Japan and abroad, which was obtained from the safety research conducted by the NRA to regulatory activities such as reviews and inspections. In FY 2024, there were 46 cases of technical support to be delivered, including support for review of conformity to the new regulatory requirements and participation in the review meetings.

3. Continuous Improvement of Regulatory Requirements

(1) Reflecting the Latest Findings in Regulatory Requirements

(i) Consideration of Reflecting the Findings from the "Interim Report on the Investigation and Analysis of the TEPCO's Fukushima Daiichi NPS Accident" in the Regulations

The NRA is implementing consideration regarding the reflection in regulations on the findings obtained from investigation and analysis of TEPCO's Fukushima Daiichi NPS Accident.

Concerning the knowledge obtained from investigation and analysis of the contamination of the reactor auxiliary cooling system of TEPCO's Fukushima Daiichi NPS Unit 1 (hereinafter "knowledge on RCW contamination"), the NRA approved the start of consideration regulatory handling at the 15th FY 2023 NRA Commission Meeting (June 14, 2023). The NRA held two meetings for hearing opinions on incorporation of the findings on TEPCO's Fukushima Daiichi NPS Accident from working team operators (hereinafter "1F Meeting for Hearing Opinions to Reflect Findings"), made a request for investigation, etc. for information necessary to proceed with the discussion, and conducted a hearing regarding the results of investigations on operators, etc. The NRA received a report on the results, etc. of 1F Meeting for Hearing Opinions to Reflect Findings at the 60th FY 2023 NRA Commission Meeting (January 24, 2024), and held a discussion among commissioners about the regulatory handling of the knowledge on the RCW contamination. Then, based on the discussion, in the 6th 1F Meeting for Hearing Opinions to Reflect Findings (March 13, 2024), the NRA conducted a hearing about the status of preparation of the procedures to be taken by operators in the event of an accident in consideration of the

knowledge on the RCW contamination.

At the 13th FY 2024 NRA Commission Meeting (June 5, 2024), the NRA received a report on the result of the hearing from the BWR operators and others in the 6th 1F Meeting for Hearing Opinions to Reflect Findings, did not recognize the necessity to add new requirements concerning this knowledge to the regulatory requirements based on the discussions made so far, then clearly recognized that the phenomenon referred to in this knowledge can occur and approved the idea of regulatory handling of the knowledge on RCW contamination, which is that it is important to take actions such as review and inspection by positioning them as one of the viewpoints to be taken into consideration.

At the 71st Technical Information Committee meeting (March 27, 2025), the NRA Secretariat reported the result of the review of the knowledge, previously identified for future consideration among those obtained from the investigation and analysis of TEPCO's Fukushima Daiichi NPS Accident based on the accumulated review results made so far, and about the countermeasures to be taken in the future.

(ii) Actions Taken to Address the Transformer Failure due to an Earthquake with Maximum Seismic Intensity of 7 that Occurred in the Noto Region, Ishikawa Prefecture on January 1, 2024

On January 1, 2024, oil leakage from the start-up transformer of Unit 1 and the main transformer of Unit 2 at Shika Nuclear Power Station of Hokuriku Electric Power Company occurred due to the 2024 Noto Peninsula Earthquake, which recorded a maximum seismic Intensity of 7, and the NRA received a report on the causes of the failures pursuant to the provisions of Article 3 of Regulation on Report Related to Electricity Concerning Facilities for Nuclear Power Generation (the Ministry of International Trade and Industry Order No. 54 of 1965) from Hokuriku Electric Power on May 31, 2024. At the 13th FY 2024 NRA Commission Meeting (June 5, 2024), the NRA received a report to that effect from the NRA Secretariat.

The NRA Secretariat made a report on the causes of the failures heard from the operators, etc. and reported the result of organizing the relationship with the current regulatory requirements at the 66th Technical Information meeting (July 25, 2024). In the meeting, it was determined to confirm the status of the efforts made by the nuclear operators through nuclear regulatory inspections because it is not necessary to change the idea of enhancing the reliability of the whole external power source system so that multiple power reception paths are not simultaneously lost, which is the idea of the current regulatory requirements on external power sources, even after the result of analysis of failure causes is taken into consideration. The NRA received the results of

Technical Information Committee meeting at the 27th FY 2024 NRA Commission Meeting (August 28, 2024).

(iii) Response to Intergranular Cracking of Stainless-Steel Piping in PWR Primary System

The NRA decided to interview the PWR licensees about the plan, progress, and results of their investigations regarding intergranular cracking of stainless-steel piping in the pressurizer spray line. This is based on the investigation of cracks in the pressurizer spray line piping of the Ohi NPS Unit 3 of Kansai Electric Power Co., Inc. from the viewpoint of the validity of Ultrasonic Testing (UT⁴¹) during in-service inspection and the feasibility of a Leak Before Break (LBB⁴²) for piping belonging to the reactor pressure boundary.

At the 25th Meeting Concerning Opinions of Operators on New Regulatory Requirements (August 22, 2024), the NRA Secretariat conducted a hearing of the investigation results, etc. by the operators in FY 2023 from the Atomic Energy Association (ATENA). It was determined that the result of this meeting is to be reported at the 68th Technical Information Committee meeting (September 26, 2024), and the study by the operators would be continuously heard. The NRA received the results of Technical Information Committee meeting at the 39th FY 2024 NRA Commission Meeting (October 23, 2024).

(iv) Response Regarding Electromagnetic Compatibility in Nuclear Power Plant

As common causes of failures in digital safety protection systems of power reactor facilities, those failures are considered to have been possibly caused by mutual interference of electromagnetic waves between devices used in measurement control equipment and other devices. Therefore, it was determined to start investigations of specific standards, etc. to be achieved as the design made in consideration of electromagnetic compatibility (hereinafter “EMC⁴³”) at the 39th Technical Information meeting (November 20, 2019).

At the 26th Meeting Concerning Hearing of Opinions on New Regulatory Requirements from Operators (December 17, 2024), the NRA Secretariat conducted a hearing on the status of responses in domestic nuclear power plants concerning EMC measures from ATENA. It was determined that the results of the meeting were to be reported at the 70th Technical Information Committee meeting (January 30, 2025), and

⁴¹ Ultrasonic Testing

⁴² Leak Before Break

⁴³ Electromagnetic Compatibility

the study by the operators would be continuously heard. The NRA received the results of Technical Information Committee meeting at the 65th FY 2024 NRA Commission Meeting (February 26, 2024).

(2) Technical Evaluation of Industry Codes and Standards

The NRA held the 6th Study Team Meeting on Technical Evaluation of the Japan Society of Mechanical Engineers (JSME) Codes on Design and Construction, Materials and Welding (June 10, 2024) in accordance with “the NRA's Program to Implement Technical Evaluation of Industry Codes and Standards” for FY 2022 to 2024, and proceeded with a study to establish technical evaluation reports of “Rules on design and construction for nuclear power plants, 2020 edition,” “Rules on materials for nuclear power plants, 2020 edition,” “Rules on welding for nuclear power plants, 2020 edition” and the “Code Case of Designs and Construction Standards: Considerations for preventing the occurrence of stress corrosion cracking in nuclear power generation facilities, 2022 edition” by the Japan Society of Mechanical Engineers.

The NRA also approved “the NRA's Program to Implement Technical Evaluation of Industry Codes and Standards” for FY 2024 to 2025 at the 19th FY 2024 NRA Commission Meeting (July 10, 2024), and in accordance with this plan, held Study Team Meetings on Surveillance Test Practice for the Reactor Vessel Structure Material and Fracture Toughness Confirmation Test Method (September 3 and December 3, 2024, February 21, 2025), and proceeded with discussion toward drafting technical evaluation documents on “Surveillance Test Practice for the Reactor Vessel Structure Material (JEAC4201-2007 (2024 Supplement))” and “Confirmation Test Method for Fracture Toughness of Machine for Nuclear Power Plant (JEAC4206-2007 (2023 Supplement))” from Japan Electric Association.

(3) Collection and Analysis of Information on Troubles and Natural Phenomena in Japan and Abroad

(i) Collection and Analysis of Information on Domestic and International Operating experience

The NRA Secretariat collects and analyzes information on the latest scientific and technological knowledge and international and domestic accidents and troubles of nuclear facilities, and at the Technical Information Committee meetings, conducts secondary screening of information that has passed primary screening from the viewpoint of whether its reflection in regulations is necessary or not. In FY 2024, the NRA Secretariat conducted primary screening of 141 cases, among which 141 cases were screened out at primary screening, and there were no cases transferred to

secondary screening as new cases. In addition, there were 2 cases that completed the secondary screening and there is 1 case that is still under investigation as part of the secondary screening. Besides, there is one case where preparation is underway to comply with regulations. In the Technical Information Committee meeting, the reason why some information had not passed primary screening was confirmed. When it has become necessary to review evaluation for the reason of new information, its review is supposed to be conducted anew.

The NRA, upon receipt of a report on the result of discussion by the Technical Information Committee, makes judgment on the actions to take, such as standardization, for cases on which regulatory action is considered to be required. The NRA received seven reports on the results of discussions by the Technical Information Committee in FY 2024 (6th FY 2024 NRA Commission Meeting (May 8, 2024), 19th FY 2024 NRA Commission Meeting (July 10, 2024), 27th FY 2024 NRA Commission Meeting (August 28, 2024), 36th FY 2024 NRA Commission Meeting (October 9, 2024), 39th FY 2024 NRA Commission Meeting (October 23, 2024), 51st FY 2024 NRA Commission Meeting (December 25, 2024), and 65th FY 2024 NRA Commission Meeting (February 26, 2025)). The NRA Secretariat made reports on the results of discussion by the Technical Information Committee to the RSEC and NFSEC, which consist of external experts, and asked advice from them (17th Subcommittee on Reactor Safety Meeting/11th Nuclear Fuel Safety Examination Committee Meeting (June 28, 2024), 18th Subcommittee on Reactor Safety Meeting/12th Nuclear Fuel Safety Examination Committee Meeting (December 16, 2024)).

(ii) Collection and Analysis of Information on Natural Phenomena in Japan and Abroad

The NRA gathered and analyzed information on natural phenomena in Japan and overseas, including publicly available materials from government agencies and academic papers. In particular, the NRA studied the necessity to make regulatory action in the future concerning the NRA Technical Note “Validation of the standard response spectra of ground motion evaluated without specifying seismic sources - addition of observation records from 2018 to 2022 -” published on the website of the NRA Secretariat, paper “A Tsunami Generated by Strike-Slip Event: Constraints From GPS and SAR Data on the 2018 Palu Earthquake” published in Journal of Geophysical Research: Solid Earth (November 2022), and the long-term evaluation “Long-term Evaluation of Offshore Active Fault on Japan Sea Side -from Northern Offshore Hyogo Prefecture to Offshore of Joetsu Region of Niigata Prefecture -” (August 2024 edition)” published on the website of the Headquarters for Earthquake Investigation Research

Promotion (August 2024), and made a report at the 66th Technical Information Committee meeting (July 25, 2024) and the 67th Technical Information Committee meeting (September 3, 2024). The NRA Secretariat made a report on the on-site investigation concerning the 2024 Noto Peninsula Earthquake and a report on the result of collection of knowledge on the earthquake at the 67th Technical Information Committee meeting and the 71st Technical Information Committee meeting (March 27, 2025), respectively.

(iii) Review of Subcommittees on Volcanic Hazards of RSEC and NFSEC

The NRA Secretariat evaluated the results of evaluation of volcanic activity monitoring by Kyushu Electric Power Company for the Sendai NPS and Genkai NPS as well as evaluation of volcanic activity monitoring by Japan Nuclear Fuel Limited for reprocessing and waste management facilities, by utilizing the report from the Subcommittees on Volcanic Hazards of RSEC (regarding “measure to judge significant changes in observation data” during volcano monitoring). At the 13th of Subcommittees on Volcanic Hazards of RSEC and NFSEC (November 13, 2024), the evaluation result by the Secretariat of the NRA concluding the appropriateness of the assessments by Kyushu Electric Power Company and Japan Nuclear Fuel Limited that there is no significant change in the activity situation of the target caldera volcano was confirmed.

At the same subcommittee meeting, the NRA Secretariat reported 2 findings that were discussed in the 63rd Technical Information Committee meeting (January 25, 2024) and 64th Technical Information Committee meeting (March 27, 2024) and received advice on the necessity of regulatory action.

(iv) Review by the Subcommittee on Earthquake and Tsunami Hazards of RSEC and NFSEC

At the 4th meeting of the Subcommittee on Earthquake and Tsunami Hazards of RSEC and NFSEC (June 24, 2024), the NRA reported 5 findings dealt with in the past 59th to 64th Technical Information Meetings and received advice on whether regulatory response is needed or not. In particular, concerning “Development of Model of Seismic Source Characteristics and Ground Motion Model at the Ikata Site Based on Guidelines for SSHAC Level 3” discussed by the NRA Secretariat in the 61st Technical Information Committee meeting, there was an opinion requesting that other operators should also be prompted to take the same actions, and the NRA Secretariat made a reply saying that it was intending to study it by exchanging opinions with the operators.

(4) Review on System for Obligation to Report

Concerning the improvement of legally obliged reporting in accordance with Article 62-3 of the Reactor Regulation Act, the NRA approved the plan to revise relevant regulations, etc. stipulating that the incidents on safety of nuclear facilities concerning failure of nuclear fuel facilities, etc. be designated as the incident subject to report and the incidents that require reporting at the decommissioning stage be limited to ones related to facility safety at the moment at the 42nd FY 2023 NRA Commission Meeting (November 8, 2023). Then, the NRA solicited public comments on the plan to revise regulations, etc. and at the 5th FY 2024 NRA Commission Meeting (April 24, 2024), approved the considerations regarding the comments submitted and determined to revise relevant regulations, etc. The NRA received a report on the status of discussion concerning the improvement of legally obliged reporting and approved how to proceed with the discussion in the future at the 49th FY 2024 NRA Commission Meeting (December 11, 2024).

Section 4. Continuous Improvement of Regulatory Activities and Response to New Regulatory Needs

1. Efforts to Improve the Review Process

Improving the review process is essential from the perspective of appropriately allocating the NRA's limited resources to safety-critical issues, and the NRA is striving to make improvements by continuously exchanging opinions with regulated parties, such as electric power companies, on how to proceed with the review process.

Concerning the review of commercial power reactors, based on the policies concerning the improvement of the review process approved at the 37th FY 2022 NRA Commission Meeting (September 7, 2022), the NRA is making efforts regarding the review meetings in general, such as holding review meetings in order to confirm the response policies of operators at high frequencies, confirming whether the findings by the NRA Secretariat are commonly understood by the operators at review meetings and documenting those findings, and confirming the policies for investigation of geological conditions and the details of implementation by operators in advance and pointing out them at early stages. For example, in the review of Tomari NPS Unit 3 of Hokkaido Electric Power Co., Inc. and Japan Atomic Power Tsuruga NPS Unit 2, the findings were documented at the end of the review meetings to ensure shared understanding. In the review of the Hamaoka NPS Units 3 and 4 of Chubu Electric Power Grid Co., Inc., the NRA devised a plan to eliminate reworking the review by discussing the evaluation policies for a combination of tsunami, etc. from the earlier stage of consideration by operators.

In FY 2024, in the 19th Opinions Exchange Meeting with Chief Nuclear Officers of Major Nuclear Power Facilities Installers (September 12, 2024), the operator showed a review process improvement plan, and the NRA approved implementation of practical opinion exchange with the operator at the 32nd NRA Commission Meeting (September 18, 2024). At the 42nd FY 2024 NRA Commission Meeting (November 13, 2024), based on the result of the opinion exchange, the NRA determined to try advance presentation of documents on the main issues, etc. in the review meeting as necessary to facilitate discussion in the review meeting, and approved the review of “Way of Reviewing Conformity to the New Regulatory Requirements Based on Opinion Exchange with the Management Layer of Electric Power Company” (approved at 37th FY 2022 NRA Commission Meeting (September 7, 2022)). Then, in consideration of an offer from the operator, the NRA determined to try advance presentation in the licensing review of conformity to the new regulatory requirements of the design policy, etc. of Hamaoka NPS Units 3 and 4 of Chubu Electric Power Grid Co., Inc., and since the 1309th Review Meeting (December 24, 2024), has implemented advance presentation of documents on the issues, etc. from the review team.

2. Reinforcement of Efforts at the Interface for Nuclear Safety, Nuclear Security and Safeguards

As the fields of nuclear safety (Safety), nuclear security (Nuclear Security), and safeguards (Safeguards) (hereinafter “3S”) have mutual influences on each other, the NRA, aiming at achieving a higher level of harmony among 3S, established “Practices concerning the Interface for Nuclear Safety, Nuclear Security, and Safeguards (Nuclear Regulation Department, Radiation Protection Group)” (hereinafter “practical guidance”) in April 2023.

The NRA received a report on the status of efforts in FY 2023 in accordance with the practical guidance at the 13th FY 2024 NRA Commission Meeting (June 5, 2024).

In FY 2024, regarding the reviews, aiming at eliminating mutual influences to the greatest extent possible, in cases where applications for permission and licenses related to nuclear safety, nuclear security, or safeguards are submitted, the department in charge shared the information on the overview of the influence on other Ss (result of confirmation by applicant) with relevant departments through the operation tool within the NRA Secretariat, held meetings, etc. with the nuclear operator as necessary, and let the persons in charge of other Ss attend the meeting, etc. Furthermore, the applications for change in approving the physical protection program based on revising review standards concerning information system security (decided on March 30, 2022) were jointly reviewed with the nuclear security department.

In a review for approval/permission of reprocessing plant, etc. of Japan Nuclear Fuel Limited, the NRA confirmed the basic idea on 3S coordination in Japan Nuclear Fuel Limited with the persons in charge of 3S in the NRA Secretariat attending. In the operational safety program, physical protection program, and accounting provisions of the company, the mutual relationship among them was stipulated for the purpose of strengthening 3S coordination. Concerning the implementation status of the recurrence prevention measures for all lights out incidents in the area monitored by inspection equipment, the NRA is continuously confirming matters related to nuclear safety by means of nuclear regulatory inspection, and is going to confirm matters related to safeguards by means of on-site inspection.

In terms of inspections, when inspection officers from the NRA Regional Office had any observations related to measures concerning another S during nuclear regulatory inspections related to nuclear safety or physical protection inspectors had any observations related to measures concerning another S, the NRA shared that information with the department in charge of the measure as necessary. In addition, as physical protection inspectors were assigned to NRA Regional Offices, communications related to mutual influence among the 3S are made with nuclear operation inspectors and coordination among them was enhanced. Additionally, nuclear security inspection officers or safeguard inspectors share information with the relevant departments if they have any observations related to other measures related to S. Furthermore, inspection officers from the NRA regional office conduct on-site checks and inspections, including the verification of Corrective Action Programs (CAP⁴⁴) related to the physical protection of nuclear material. If they make any observations during these checks, they share them with the relevant departments.

To enhance the case examples, the NRA widely collected case examples of mutual influence among the 3S, case examples in which mutual influence could be avoided due to observations made by the staff in charge of S, and others. The NRA also conducted a review as to whether case examples that were assessed to be influential on other Ss by the operator (3S impact assessment report) could be referenced for practical work in a meeting by relevant parties within the NRA Secretariat that is held every quarter. Other than the above-mentioned, in the ongoing educational programs for inspectors, etc. the NRA endeavors to hold lectures concerning 3S collaboration and 3S joint sessions to improve staff member expertise. In addition, in a meeting with a nuclear operator, the NRA exchanged opinions on 3S coordination efforts within the nuclear operator, and requested further enhancement of the coordination among the 3S that the nuclear

⁴⁴ Corrective Action Program

operator should take initiative while trying to horizontally develop the knowledge obtained through past efforts.

In the safeguards department, for the purpose of fostering understanding for safeguards in the nuclear safety department and in the nuclear security department, by sharing information concerning safeguards through inspectors' meetings and sharing the inspection schedule with nuclear regulation offices, the actual opportunities for the inspectors to participate in on-site inspections with the IAEA were provided. In addition, the NRA addressed individual concerns concerning the coordination among 3S by obtaining information on the specifications of the safeguard devices planned to be installed in the MOX⁴⁵ Fuel Fabrication Plant of JNFL and their installation locations from IAEA and conveying that information to IAEA so that nuclear safety and safeguards do not adversely affect each other. Furthermore, the NRA conducted reviews under 3S coordination by having staff from departments in charge of nuclear safety and nuclear security attend the meeting on the review related to the application for approval of changes in the accounting provisions of the reprocessing plant and enrichment/disposal plant of the company, and by adding to the provisions a provision concerning continuous improvement in which the efforts in mutual coordination among the 3S interface is systematically implemented and evaluated by using the nuclear safety quality management system plan.

In the nuclear security department, participation in "Discussions on the Training and Regulatory Involvement Regarding Emergency Response of Nuclear Operators" allowed for collaboration with nuclear safety in matters related to emergency response based on events related to the physical protection of nuclear material. Progress was made in discussions on coordination and information sharing between the two departments. In confirmation of operators' activities related to nuclear security, the NRA also confirmed cases in which activities for nuclear safety conducted by operators may pose problems from the viewpoint of nuclear security. In consideration of this issue, the NRA encouraged the operators make improvement while closely coordinating with the department in charge of nuclear safety so that both the nuclear safety and nuclear security are satisfied, and confirmed that such improvement was made.

3. Safety Regulations of Ageing Power Reactors

Concerning the safety regulations of aged power reactors, a revision bill that strengthens "System of Approval for Long-Term Facility Management Plan" through integration of "System of Approval for Extension of Operational Period" to review

⁴⁵ Mixed Oxide

whether the operation period of a commercial power reactor is allowed to be extended by less than 20 years only once at its 40th year after starting operation and “System for Technical Assessment of Aging” to review long-term facility management policies for aged reactor facilities at the 30th year since the start of operation and every ten years after that was drafted. Such revision bill was included in the bill for partial revision of the Electricity Business Act and Other Acts for Establishing Electricity Supply Systems for Realizing a Decarbonized Society, and was decided upon by the Cabinet on February 28, 2023, and then through the discussion at the 211th Ordinary Diet session, promulgated on June 7, 2023.

As the System of Approval for Long-Term Facility Management Plan is going to come into force on a large scale on June 6, 2025, in FY 2024, the NRA studied the following laws and regulations that are necessary for the full-fledged enforcement of the system, solicited public opinions and interviewed operators, and then requested discussion of relevant cabinet orders and revision of relevant rules, etc., and determined to revise the relevant rules, etc. at the 55th FY 2024 NRA Commission Meeting (January 22, 2025)

- Cabinet Order on the Partial Revision of Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors
- Ordinance to partially revise the regulations on the Rules on Security of Reactor Facility of Fukushima Daiichi Nuclear Power Station, TEPCO and Protection of Nuclear Fuel Materials etc.
- Ordinance to partially revise Ordinance on Installation and Operation, etc. of commercial power Reactors and Ordinance on Installation and Operations of Reactors in the Stage of Research and Development.
- Rules to Partially Revise the Standards of Review on Operational Safety Program of Commercial Power Reactors
- Rules to Partially Revise the Operational Guide for Pre-Operational Inspection, Periodic Operational Inspections, and Safety Measures and the Method for Describing Long-Term Facility Management Plan of Commercial Power Reactors Based on the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors

Thus, the development of the system toward full-fledged enforcement of the Approval for Long-Term Facility Management Plan has been completed.

4. Exchange of opinions on replacement reactor

At the 18th Opinions Exchange Meeting with Chief Nuclear Officers of Major Nuclear Power Facilities Installers (hereinafter “CNO opinion exchange meeting”)

(March 25, 2024) and the 19th CNO opinion exchange meeting (September 12, 2024), the operator side presented specific matters indicating that the concept of safety design of replacement reactors and the predictability of regulations are insufficient, and made a proposal on setting up a place where the regulators and operators discuss the regulation standards on replacement reactors. At the 32nd FY 2024 NRA Commission Meeting (September 18, 2024), upon receiving the report on the result of the 19th CNO opinion exchange meeting, the NRA instructed the NRA Secretariat to organize the implementation framework and approach for conducting opinion exchanges with operators concerning replacement reactors and report back, and at the 36th FY 2024 NRA Commission Meeting (October 9, 2024), for the purpose of organizing the regulatory issues, etc. and in order to contribute to the discussion in NRA Commission Meeting on regulatory handling, the NRA approved setting up a working-level technical exchange meeting with operators on the design of replacement reactors.

The technical opinion exchange meeting was held twice (December 9, 2024 and March 18, 2025), and opinions on the design ideas for replacement reactors, response to severe accidents, etc. based on permanent equipment, and other matters were exchanged.

5. Review of operation of safety improvement evaluation system

Concerning the review of the role and operation of the evaluation system for improving the safety of commercial power reactors to be conducted by the commercial power reactor established in accordance with Article 43-3, paragraph 29 of the Reactor Regulation Act (hereinafter “evaluation systems for safety improvement”), the RSEC and NFSEC conducted reviews and summarized the “Review of approach to evaluation systems for safety improvement of power reactor facilities and the operation thereof Concept and Operation of Evaluation Systems for Safety Improvement of Commercial Power Reactors” (hereinafter in this section referred to as “report”) on July 5, 2024. At the 21st FY 2024 NRA Commission Meeting (July 24, 2024), the NRA exchanged opinions about the contents of the report with both RSEC and NFSEC chairmen.

Thereafter, at the 38th FY 2024 NRA Commission Meeting (October 16, 2024), the commissioners discussed the policy of review of the safety improvement evaluation system in consideration of the report. After the discussion, as matters subject to short-term review, the NRA approved the draft of relevant rules and guidance incorporating organized materials that explain the latest status of devices, etc. in commercial power reactors, reviewed the handling of the latest scientific and technological knowledge at home and abroad, reviewed the evaluation and notification timing, reviewed the PSR (periodical safety review) in compliance with the IAEA safety guidance and response to

“oldness of design” , and implementation solicitation of public comments for them at the 55th FY 2024 NRA Commission Meeting (January 22, 2025).

6. Responses Concerning Clearance Centralized Treatment Operation in Fukui Prefecture

Concerning the clearance centralized treatment operation of demolition waste of NPS studied by Fukui Prefecture, the NRA received reports on the details of the opinion exchange implemented among the NRA, Fukui Prefecture, the Agency for Natural Resources and Energy, and relevant operators held in 2023 and on the future response to the technical issues based on those opinions at the 2nd FY 2024 NRA Commission Meeting (April 10, 2024).

In this operation, it is studied that the new operating body accepts the clearance subjects from multiple nuclear power plants, centrally conducts decontamination, melting, radioactivity measurement, and others in a single base, and after the clearance is confirmed, those subjects are reused. At the 57th FY 2024 NRA Commission Meeting (January 29, 2025), as a response to technological issues concerning this operation, the NRA approved clarification of a rule that the clearance subject must not be intentionally mixed with materials, etc. yet to be contaminated with radioactive substances in a melting furnace in order to satisfy the clearance level as part of the clearance review standards.

7. Intensive Management of Radioactive Materials including Nuclear Fuel Materials without Actual Use State

Radioactive materials (radioisotopes, nuclear fuel materials, and nuclear source materials) have been widely used in the fields of research, medicine, industry, agriculture, etc. However, there are some materials that are no longer used, stored without actual use, and are not under legal control without a clear source or history. The “Basic Policy for Nuclear Energy” (decision by the NRA, February 20, 2023) states there are "radioactive materials that are not in actual state of use but only stored throughout Japan in many private and public facilities, there are many cases of radioactive materials being discovered that are not under legal control, and there are concerns about the emergence of risks in safety and physical protection of nuclear material. In order to reduce these risks, the relevant administrative agencies, JAEA, and others should cooperate and collaborate in conducting necessary studies on concrete measures to realize intensive management of these radioactive materials," the NRA, continuously from FY 2023, proceeded with the study for realizing centralized management of nuclear fuel materials without actual use states in cooperation with the

relevant administrative agencies and JAEA.

The NRA Secretariat has established a contact point to receive consultations on the handling of such radioactive materials when they are discovered in a state where they are not properly managed and is taking measures to ensure that they are properly managed according to the situation. In FY 2024, a total of 106 discovery cases were reported: 21 cases for radioisotopes, 75 cases for nuclear fuel materials, and 10 cases for nuclear source materials.

8. Exchange of opinions concerning the scope of application of the Reactor Regulation Act to hydrogen manufacturing facility⁴⁶ of HTTR of JAEA

Concerning hydrogen manufacturing demonstration tests utilizing heat of a nuclear reactor that is planned for the high temperature engineering test reactor (HTTR) at the Oarai Research & Development Institute (North District), JAEA made an administrative consultation as to which piece of equipment of the hydrogen manufacturing facility that is planned to be installed in the same plan is subject to the application of the Reactor Regulation Act. At the 63rd FY 2024 NRA Commission Meeting (February 19, 2025), for the purpose of judging the overview of the hydrogen manufacturing facility for which the administrative consultation was made and the appropriateness of the JAEA's idea on application of law, the NRA approved the implementation of “exchange of opinions concerning the scope of application of the Reactor Regulation Act to hydrogen manufacturing facility of HTTR of JAEA at the practical level” so as to confirm the presence of the safety function of the hydrogen manufacturing facility, the impact on the nuclear reactor, and other matters.

The NRA Secretariat implemented opinion exchanges twice (February 28 and March 10, 2025). As the impact, etc. of the hydrogen manufacturing facility on the nuclear reactor was generally confirmed, at the 69th FY 2024 NRA Commission Meeting (March 19, 2025), the NRA received a report on organizing the scope of application of the Reactor Regulation Act in consideration of the result of the opinion exchange and approved the future approach to the review process.

⁴⁶ At the 1st Opinion Exchange Meeting (February 28, 2025), JAEA explained that it would change the name of its hydrogen manufacturing facility to “heat utilization test facility.”

Chapter 3 Promoting nuclear security measures and steadily implementing protective measures

○Summary of Chapter 3

(Promotion of Nuclear Security Measure)

The NRA rigorously conducted the review of applications for changes in security plans for nuclear facilities and carried out planned nuclear regulatory inspections mostly as scheduled. Additionally, the NRA effectively implemented security regulations for specified radioisotopes through on- site inspections and other means.

Furthermore, to prevent nuclear security incidents and ensure rapid response in case of occurrence, the physical protection inspectors deployed to the NRA Regional Offices and the headquarters worked in a coordinated manner.

To promote nuclear security measures, the NRA hosted the IAEA's International Physical Protection Advisory Service (IPPAS) mission from July 22 to August 2 of 2024.

(Steady Implementation of Safeguards)

In the IAEA's report on safeguard activities in Japan for 2023, it was concluded that all nuclear materials in the State remained in peaceful activities (broader conclusion)

For TEPCO's Fukushima Daiichi NPS Units 1-3 where routine inspections cannot be conducted, in addition to the additional safeguard measures implemented until FY 2023, the NRA conducted necessary verification activities, including inspections for the transfer of fuel assemblies from the common spent fuel pool to the dry spent fuel cask interim storage facility, appropriate response to the safeguard activities that are necessary for trial retrieval of fuel debris from Unit 2, through continuous discussions and consultation with the IAEA.

The IAEA has developed a state-level safeguard approach for each country to maintain efficient and effective safeguard measures with limited resources. In response to the development of such an approach for Japan, the NRA discussed and consulted with the IAEA on facility-type specific implementation procedures to be applied to each nuclear facility in Japan, and applied these procedures to all the facilities. In addition, the NRA facilitated the international community's understanding of Japan's safeguard measures and contributed to strengthening and improving the efficiency of international safeguards through participation in various international conferences related to safeguards, education of safeguard personnel, and support for development of safeguard technologies.

Additionally, the NRA provided necessary guidance and supervision for the designated information processing organization and designated organization implementing safeguard inspections to ensure the appropriate and accurate performance of their duties.

Section 1. Promotion of Nuclear Security Measures

1. Rigorous and Proper Implementation of Regulations on Nuclear Security

(1) Rigorous and Proper Implementation of Regulations on Physical Protection

(i) Rigorous Implementation of Nuclear Regulatory Inspection Relating to Physical Protection

The NRA conducts nuclear regulatory inspections related to the physical protection of nuclear materials and associated facilities in accordance with the Reactor Regulation Act. As nuclear regulatory inspections, the NRA conducts the basic inspection consisting of a routine inspection (mainly conducted by inspectors stationed at the NRA Regional Offices) and team inspections (mainly conducted by inspectors with expertise at the NRA Secretariat). Based on the inspection plan for FY 2024, a total of 114 team inspections were conducted, which included the check of facilities related to the physical protection of nuclear materials and confirmation of the status of the information system security measures.

Concerning the physical protection of nuclear materials at TEPCO's Kashiwazaki-Kariwa NPS that had gone through an additional inspection in December 2023, based on the determination made at the 56th FY 2023 NRA Commission Meeting (December 27, 2023), the NRA determined to request that TEPCO maintain the improved states of the power plant and make efforts for further improvement. Also the NRA determined to continuously oversee the status of the efforts through basic inspections, particularly focused on monitoring in stormy weather, PPCAP (Physical Protection Collective Action Program), and Physical Protection Monitoring Office.

Furthermore, in order to prevent nuclear security incidents and enable a swift response in case of occurrence, the NRA incorporated the necessary measures in FY 2025 budgets.

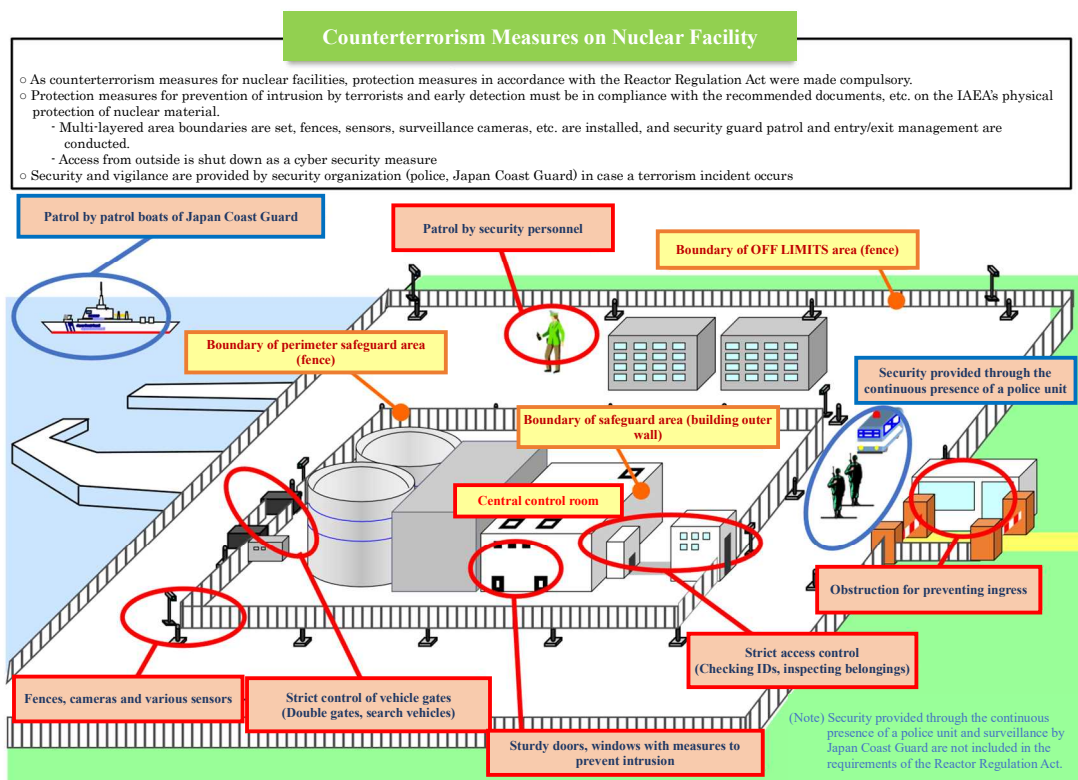


Figure 3-1: Overview of Protection Measures for Nuclear Facilities

(ii) Rigorous Review of Security Plan

The NRA conducts reviews of the security plans in accordance with the Reactor Regulation Act to establish necessary matters related to the protection of specific nuclear fuel materials. In FY 2024, 55 changes to security plans were approved.

Furthermore, the NRA continued the review of application for changes in the security plan submitted by operators in accordance with the Examination Standard for Security Plan (hereinafter “Examination Standards” in this section) which had been revised on April 8, 2019 in light of the threat concerning sabotage on the information systems of nuclear facilities (set on October 15, 2018), and approved all of 21 applied offices.

(iii) Efforts for Improving Physical Protection Training

Among the initial response measures that operators should take in the security event of nuclear material and associated facilities, determination of whether it is an information collection level event or alert level event, implementation of measures such as evacuation instructions and sharing of information between the NRA Secretariat and law enforcement are especially important. The NRA confirmed the status of the proficiency improvement of these relevant operators through the nuclear regulatory

inspections in FY 2024. By using the NRA Emergency Response Center (ERC), the NRA also participated in operators' trainings simulating physical protection incidents, issued technical advice to the operators, and confirmed the coordination with the response concerning nuclear safety in the NRA Secretariat.

(iv) Nuclear Security Measures During the Transport of Specific Nuclear Fuel Material

Based on the Reactor Regulation Act, the NRA requires that nuclear operators implement security measures when they transport specific nuclear fuel materials outside of their facilities or premises. These measures include locking and sealing the transport containers containing specific nuclear fuel materials. Additionally, before transportation commences, agreements must be established among relevant parties, such as shippers and recipients, to clarify responsibilities related to the transportation process. These agreements must then be subject to confirmation by the NRA.

In FY 2024, the NRA confirmed 27 agreements related to the transportation of specific nuclear fuel materials based on relevant regulations and engaged in discussions with relevant government agencies regarding nuclear security measures during transport.

(v) Consideration of Improvements to the System Related to the Physical Protection

In order to consider improvements of the system related to the physical protection of nuclear material, the NRA exchanged opinions with nuclear operators and ATENA, continuously from FY 2023, where they discussed the direction of concrete improvements in order to make the efforts on physical protection of nuclear materials more effective and efficient.

(2) Steady Implementation of Security Regulations for Specified Radioisotope

The NRA requires operators that handle highly hazardous radioisotopes (hereinafter "specified radioisotopes") to take security measures to prevent theft under the Radioisotope Regulation Act and verifies that security measures have been in place through on-site inspections of the facility where specified radioisotopes are handled.

In FY 2024, the NRA carried out 90 on-site inspections related to the security of specified radioisotopes. Furthermore, in February 2025, the NRA implemented the Specified Radioisotopes Security Manager, etc. Fostering Program to foster specified radioisotope security managers. In addition, the Nuclear Safety Technology Center, a registered periodic training organization for specified radioisotope security managers

implemented the Periodic Training for specified radioisotope security managers two times in the same period.

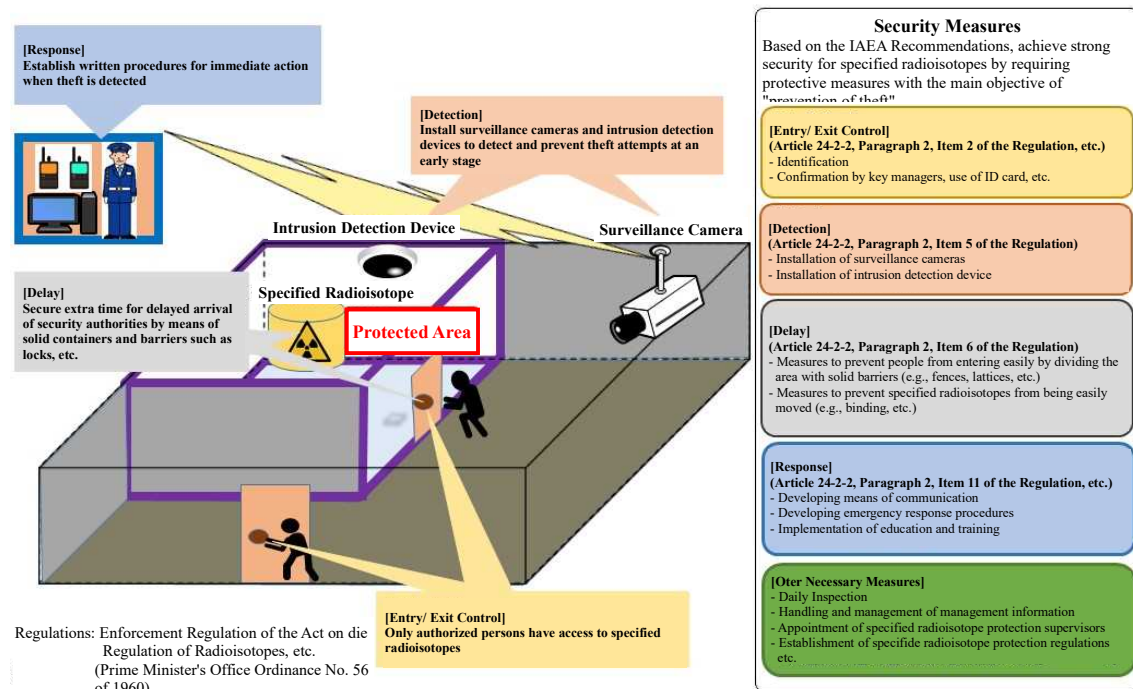


Figure 3-2: Protection Measures for Specified Radioisotopes

2. Response to Nuclear Security Challenge

(1) Fostering a Nuclear Security Culture

The NRA had dialogs and interviews with the management layer of operators in order to foster a nuclear security culture in the operators.

(2) Enhancement of Computer Security Measures

The NRA partially revised its examination standards (determined on March 30, 2022, enforced on October 1, 2023) to strengthen cyber security measures. In FY 2024, it advanced the review of applications for change in approval of regulations on physical protection of nuclear materials that were submitted by operators in response to the revision of review standards and confirmed the implementation status of the physical protection measures (information system security measures, nuclear material physical protection training, etc.) by operators in consideration of the revision of the examination standards through the nuclear regulatory inspections.

(3) Reception of IPPAS Mission and Response to Result

The NRA accepted the IPPAS mission aiming to confirm the “nuclear security system concerning nuclear material and nuclear facility (including transportation of nuclear material),” “implementation status of nuclear security in nuclear facility,” “security of radioactive materials and relevant facilities/operations (including transportation of radioactive materials),” and “computer security” in the time period from July 22 to August 2, 2024. In this mission, the NRA, staff from the Ministry of Land, Infrastructure, Transport and Tourism, and other parties explained the regulatory system concerning nuclear security in Japan, nuclear security measures taken on nuclear materials, radioactive materials, and their transportation, and other matters, and answered questions from the mission team and exchanged opinions with it. The mission team also visited the Mihama NPS of Kansai Electric Power Co., Inc. on July 26.

Through this mission, the mission team expressed the opinion that Japan’s nuclear security system was strong, and on November 28, 2024, the NRA received recommendations and advice that contribute to further strengthening of Japan’s nuclear security system and IPPAS Mission Report that provides good practices that contribute to the continuous improvement of the international nuclear security and serve as references for other IAEA member states.

The NRA received reports on the status of responses made in consideration of the recommendations and advice provided in the above report at the 56th FY 2024 NRA Commission Meeting (January 22, 2025) and the 58th FY 2024 NRA Commission Meeting (January 29, 2025).

3. Participation in International Conference

To continually improve regulations for nuclear security measures, the NRA incorporates the latest knowledge relating to nuclear security, obtained through international conferences and so on, into applicable laws and regulations.

The NRA participated in the IAEA’s International Conference on Nuclear Security (held from May 20 to 24, 2024), gathered the latest knowledge, etc. related to the physical protection of nuclear material and security of specified radioisotopes, and incorporated Japan’s experiences and opinions into discussions. Furthermore, during meetings of the IAEA’s Nuclear Security Guidance Committee (NSGC) held on June 11-14 and December 3-6, 2024, the NRA contributed to discussions on the review process of nuclear security series documents and drafts of nuclear security series documents. The NRA received a report on the outcomes of these meetings at the 23rd FY 2024 NRA Commission Meeting (July 31, 2024) and the 56th FY 2024 NRA Commission Meeting (January 22, 2025)

The NRA also participated in the 13th meeting of the U.S.-Japan bilateral Nuclear Security Working Group (NSWG) held on January 27 and 28, 2025, and agreed on plans for technical information exchange activities related to implementing Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Rev.5). Furthermore, in this meeting, the NRA confirmed that the activity to exchange technical information on physical protection of specified radioisotopes between Japan and U.S. would be continuously implemented.

Section 2. Steady Implementation of Safeguards

1. Steady Implementation of Safeguard Activities in Japan

In accordance with the Atomic Energy Basic Act (Act No. 186 of 1955), Japan has established a fundamental policy of limiting nuclear energy utilization to peaceful purposes. Japan is a signatory to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and has entered into agreements with the IAEA in implementation of Article III, paragraphs 1 and 4 of the NPT. These agreements, known as the “Japan-IAEA Safeguard Agreements” and their additional protocols, ensure that Japan adheres to non-proliferation commitments. Bilateral nuclear cooperation agreements to promote cooperation concerning the peaceful use of nuclear power have also been concluded with 14 countries and one international organization. By complying with these international commitments in good faith, Japan is demonstrating to the international community that it is limiting its use of nuclear power to peaceful purposes.

The NRA implements the necessary regulatory controls in Japan and coordinates operations with the IAEA and other organizations in Japan and overseas in order that Japan can fulfill its obligations under its international commitments and maintain the trust of Japan by the international community pertaining to the peaceful use of nuclear power.

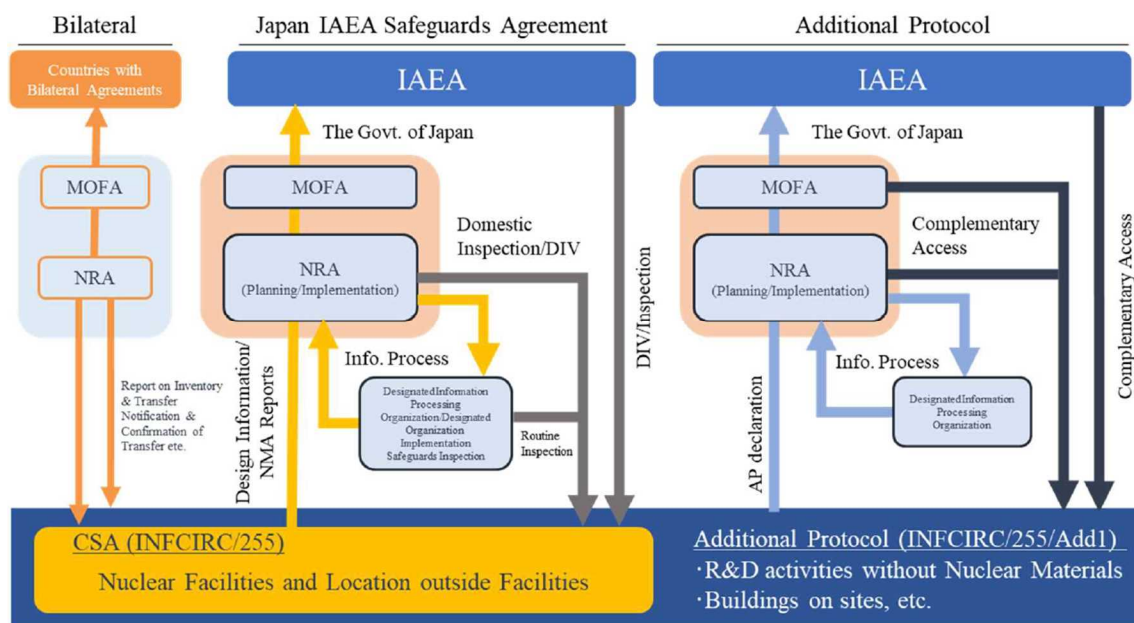


Figure 3-3: Safeguard Implementation Arrangement

(1) Fulfilling the Japan-IAEA Safeguards Agreement

(i) Permission for the Use of Internationally Controlled Material and Approval of Accounting Provisions

As a general rule under the Japan-IAEA Safeguards Agreement, all nuclear materials possessed in Japan are subject to this agreement. Thus, even if nuclear fuel materials not subject to safety controls are used, they are subject to permission or approval for use as international controlled material. In FY 2024, there were 32 permits or approvals for the use of such international controlled materials and 363 notifications of changes. To ensure the proper accounting for and control of international controlled materials in Japan, nuclear operators, including users of international controlled materials (hereinafter "international controlled material users"), are obligated to stipulate their accounting provisions. In FY 2024, there were 35 approvals for accounting provisions and 114 approvals for changes to accounting provisions.

(ii) Application Based on Accounting Reports, Information Provisions on Facility Design, etc. and Additional Protocol

Nuclear material accounting is an important basic step in safeguards, and international controlled materials users are obligated to report the current inventory and changes of inventory of nuclear materials, etc. to the NRA in accordance with the Reactor Regulation Act. In FY 2024, 2,165 operators were subject to submitting accounting reports, with the number of reports for each category as shown in Table 3-1.

Once the submitted accounting information is processed at the Nuclear Material

Control Center (NMCC), which is designated as an information processing organization under the Reactor Regulation Act, the NRA compiles it into an accounting report and submits it to the IAEA through the Ministry of Foreign Affairs on a timely basis. In addition, the NRA provides design information relating to facilities subject to the Japan-IAEA Safeguards Agreement and other information required to implement safeguards and submits a declaration based on the Additional Protocol to the IAEA through the Ministry of Foreign Affairs.

Table 3-1: The Number of Accounting Reports for FY 2024
(April 1, 2024, to March 31, 2025)

Type	No. of Cases
Inventory change reports	1,342
Material balance reports	380
Physical inventory listings	4,661
Nuclear fuel material management reports	3,725

Inventory and Inventory changes of Nuclear Material in Japan

(i) Major inventory and inventory changes in 2023

(Figure summarizing the results of accounting for and control of nuclear material at each facility)

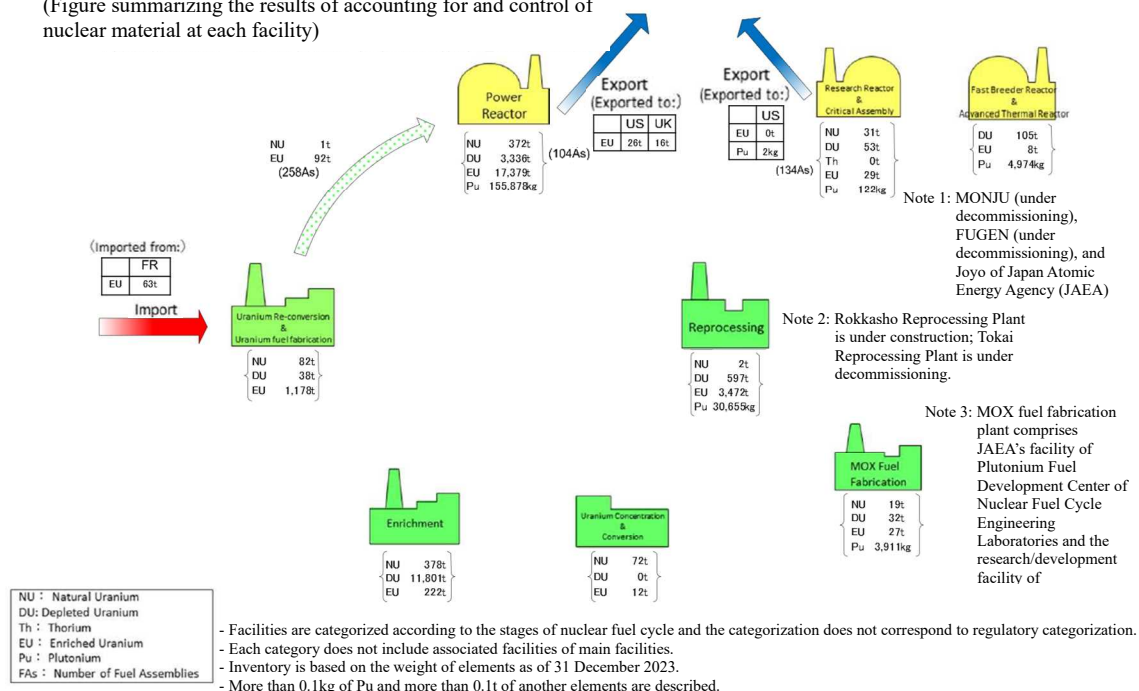


Figure 3-4. Number of Nuclear Materials in Japan

(iii) Verification Activities

The IAEA conducts on-site verification activities, including inspections of facilities,

based on information submitted by Japan. Of these on-site verification activities, inspections are carried out after going through communication and adjustment by the NRA and at the same time as Japan's safeguard inspections are carried out, in the presence of officials of the national government or of an organization designated by the NRA. Most of the safeguard inspections are conducted by the NMCC⁴⁷, which has been a designated organization implementing safeguard inspections under the Reactor Regulation Act, according to instructions issued by the NRA. The IAEA's verification of facility design information is conducted together with on-site inspections conducted by the NRA, in the presence of NRA staff. The IAEA's complementary access under the Additional Protocol is attended by the staff of the NRA and the Ministry of Foreign Affairs. Table 3-2 shows the record of safeguard inspections carried out by the State in FY 2024.

⁴⁷The Nuclear Material Control Center has been designated as a designated information processing organization under Article 61-10 of the Reactor Regulation Act since 1977 and as a designated organization implementing safeguard inspections under Article 61-23-2 of the same Act since 1999.

Table 3-2: The Results of Safeguard Inspections and Related Activities Conducted by Japanese Government Personnel in FY 2024
(April 1, 2024, to March 31, 2025)

Type	Nuclear Regulation Authority	Nuclear Material Control Center	Ministry of Foreign Affairs
Safeguard Inspection	122 person-days	1,794 person-days	
Design information verification	120 person-days		
Complementary access	34 person-days		18 person-days

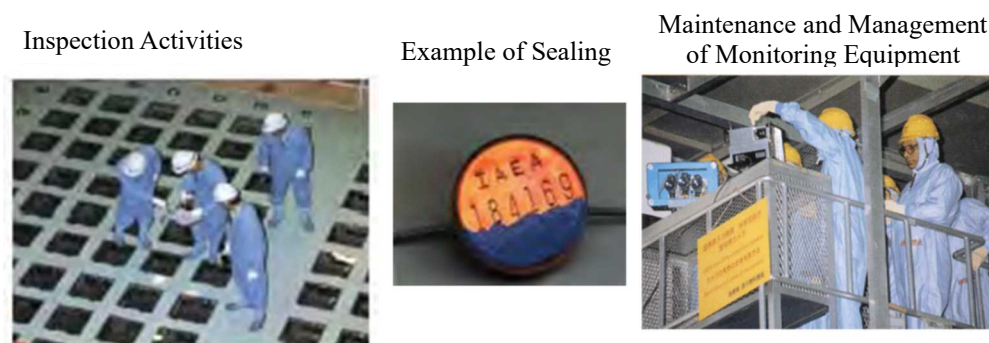


Figure 3-5. Safeguard-Related Activities

(iv) Coordination for the Implementation of Safeguards

To facilitate the implementation of safeguards, the NRA has held meetings with the IAEA with the attendance of relevant domestic organizations for the purpose of sharing information on the state of facilities, investigating issues that arise when safeguards are implemented and adjusting. In FY 2024, a total of 14 specialized working group meetings focusing on specific types of facilities were held to facilitate discussions and coordination on safeguard-related issues.

The strengthening of the efforts concerning the 3S interface in consideration of all lights out incidents that occurred on January 28, 2023 at the monitoring target area of the inspection equipment at the Rokkasho Reprocessing Plant of Japan Nuclear Fuel Ltd. is described in Chapter 2, Section 4.

(v) IAEA's Safeguards Conclusion

At the 7th FY 2024 NRA Commission Meeting (May 15, 2024), the NRA received a report from the NRA Secretariat regarding the implementation results of safeguard activities in Japan throughout 2023. This report was provided to contribute to the

evaluation of Japan's safeguard activities by the IAEA. The IAEA draws safeguard conclusions every year based on the evaluation of all information obtained through safeguard activities by the contracting countries to the Safeguard Agreements and reports it at the IAEA's Board of Governors in June of the following year. As a result of the safeguard activities in Japan in 2023, the IAEA found no indication of the diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared nuclear material or activities. On this basis, the IAEA also concluded in 2023 that all nuclear material remained in peaceful activities (broader conclusion). This conclusion marked 21 consecutive years since the broader conclusion was drawn for Japan for the first time in 2003.

(2) Implementation of Procedures related to Internationally Controlled Material based on Bilateral Nuclear Cooperation Agreements

Japan has concluded bilateral nuclear cooperation agreements with 14 countries and 1 international organization. Under these agreements, Japan and its partners commit to using transferred nuclear source materials, nuclear fuel materials, moderator materials, and nuclear fuel materials produced by using these transferred materials only for peaceful purposes. Japan also undertakes various procedures regarding the materials subject to these agreements. In FY 2024, the NRA conducted 26 confirmations of transferred nuclear materials, etc., from contracting parties, and 4 confirmations of transferred nuclear materials to contracting parties based on the bilateral agreements. Additionally, with the support of the designated information processing organization, the NMCC, the NRA submitted 14 inventory lists to contracting parties.

(3) Revisions to the Rules on Use of Internationally Controlled Materials, etc.

The regulations on international controlled materials users who only use a small amount of nuclear fuel materials have been classified into those who use them for research activities related to nuclear fuel cycle (hereinafter "small-amount nuclear international controlled materials users") and other international controlled materials users (hereinafter "small-amount non-nuclear international controlled materials users") by the Rules on Use of Internationally Controlled Materials, etc. (the NRA Ordinance No. 4, 2024; hereinafter "international material ordinance"), and some of the safeguard activities of small-amount non-nuclear international controlled materials users has been exempted compared to small-amount nuclear international controlled materials users.

This time, it has become necessary to make necessary revisions of the international material ordinance because IAEA has obliged small-amount non-nuclear international controlled materials users to make the same report as done by small-amount nuclear

international controlled materials users to IAEA when small-amount non-nuclear international controlled materials users conduct import/export of nuclear fuel material, and as the international material ordinance had a complicated article system due to multiple revisions made so far since its establishment in 1961, it has become necessary to reflect the procedures for complementary access and agreement requirements more appropriately based on regulatory experiences accumulated so far. The revised international material ordinance was enforced on October 1, 2024. Furthermore, the NRA organized procedures and interpretations related to the international material ordinance and made contributions to the effective and efficient implementation of the safeguard activities.

2. Safeguards at TEPCO's Fukushima Daiichi NPS

Normal on-site verification activities have been carried out by the IAEA for all nuclear materials in reactors except Units 1 to 3 at the Fukushima Daiichi NPS. Normal inspections cannot be carried out for Units 1 to 3 reactors, due to the difficulty of entering these reactors. Therefore, through consultations with the IAEA and relevant domestic organizations, a continuous monitoring system composed of surveillance cameras and radiation monitors, and special additional verification activities applicable only to this NPS site have been introduced, contributing to building a framework to allow the IAEA to verify that no undeclared nuclear material has been moved from Units 1 to 3. In FY 2024, in the presence of NRA staff, the NRA conducted special additional verification activities applicable to Units 1 to 3 five times as a part of complementary access. Toward trial retrieval of fuel debris from Unit 2, the NRA closely coordinated with IAEA and relevant domestic organizations so that appropriate verification methods and accounting are applied, and appropriately addressed the IAEA's safeguard activities. Regarding the Fukushima Task Force Meeting⁴⁸, the meeting was held on March 4, 2025. During this meeting, discussions were held on accounting and safeguard methods for the temporary storage facility for fuel debris to be constructed within the Fukushima Daiichi NPS site and information on on-site activities necessary for the implementation of safeguards was also shared.

3. Status of Efforts toward Completion of Construction Rokkasho Reprocessing Plant and MOX Fuel Fabrication Plants of Japan Nuclear Fuel Limited

Looking ahead to trends including the completion schedule of construction of Rokkasho Reprocessing Plant and MOX Fuel Fabrication Plants, the NRA is discussing

⁴⁸ Meeting for the Japan's government to discuss the safeguards of TEPCO's Fukushima Daiichi NPS with IAEA department directors. This was established in March 2012.

how to address safeguard issues and, while staying in close contact with IAEA and operators, systematically implementing the development, installation, introduction, etc. of necessary safeguard devices and appropriately renewing relevant equipment and devices.

Concerning Rokkasho Reprocessing Plant, the NRA implemented evaluation related to the improvement of nuclear material accounting accuracy, discussion of issues toward completion, support for the development of near real time accountancy (NRTA⁴⁹) by the IAEA, and others along with the Nuclear Material Control Center and operators.

Concerning the increasing trend of the difference between the inventory amount listed on the book and actual inventory amount (MUF⁵⁰) in some mass balance areas, the NRA investigated the cause of this trend with IAEA, Nuclear Material Control Center, and operators.

Concerning the MOX Fuel Fabrication Plants, although the scheduled completion time is revised to within FY 2027, the NRA held discussions on the performance verification test of devices necessary for safeguards and the development, installation, introduction, etc. of devices with IAEA, U.S.A. (Los Alamos National Laboratory), JAEA, and other organizations. From March 4 to 6, 2025, at a meeting with the U.S. side, the NRA could specifically discuss and confirm the plan of and procedures for transportation of non-destructive measurement devices for MOX powder developed by the U.S.A. to Japan, along with the plan and implementation details of the performance confirmation test of the non-destructive measurement device for plutonium amount measurement in glove box in the MOX Fuel Fabrication Plant.

Furthermore, concerning the status of the design/construction approval check of the Rokkasho Reprocessing Plant and MOX Fuel Fabrication Plant, the NRA is summarizing pieces of information obtained at review meetings and through interviews with operators, and making efforts to periodically share the progress with IAEA.

In addition, in order to make contributions to appropriate operation of the Rokkasho Safeguards Laboratory (OSL⁵¹), the NRA appropriately implements renewal of the OLS equipment and implements final confirmation test of response procedures (OSL backup plan) in accordance with an actual inventory verification scenario so that the safeguards based on the international promise will be continuously implemented even in cases where the OSL cannot be used in the short-or-long term, and discusses the response procedures at the Rokkasho Reprocessing Plant at the time of actual inventory verification and during facility operation.

⁴⁹ Near Real Time material Accountancy

⁵⁰ Material unaccounted for

⁵¹ Onsite Laboratory

4. International Contribution Concerning Safeguards

(1) Transmission of Information on Japan's Safeguard Activities

The NRA dispatched information on Japan's safeguards and promoted understanding by the international society in the training course of the ESARDA⁵² (April 15 to 19, 2024), ASTOP⁵³ (October 3 and 4, 2024) and the annual meeting of APSN⁵⁴ (November 5 and 6, 2024).

(2) Support for the Implementation of Safeguards by the IAEA and Foreign Countries

The technological development required for the IAEA to implement safeguards has been supported by the key IAEA member states. Japan has proactively contributed to improving technological capabilities of the IAEA and member states and strengthening international safeguards through frameworks such as the Japan Support Program for Agency Safeguards (JASPAS). The program covers a broad array of specific support plans including participation in the IAEA Network of Analytical Laboratories where environmental samples collected by IAEA inspectors are analyzed, technical support for establishment of safeguard systems in other member states, and provision of training opportunities for IAEA inspectors and safeguard officials of member states. The NRA has coordinated overall support programs and provided necessary funds, and 30 cases are in progress. Furthermore, Japan has offered its expertise during the training course on nuclear material accountancy jointly organized by the JAEA and the IAEA.

5. Guidance and Supervision of Designated Information Processing Organization and Designated Organization Implementing Safeguard Inspections, etc. Under the Reactor Regulation Act

NMCC is obligated to perform its duties appropriately as a designated information processing organization and a designated organization implementing safeguard inspections under the Reactor Regulation Act. In order to ensure the proper execution of NMCC's safeguards-related tasks, the NRA encourages the enhancement of the center's safeguard implementation structure. Additionally, the NRA conducts regular inspections based on the Reactor Regulation Act to confirm compliance with relevant provisions of the Act and the implementation status of information security measures and so on. On January 20 and 21, 2025, the NRA confirmed the operation status of the quality

⁵² European Safeguards Research and Development Association

⁵³ Asia Senior-Level Talks on Non-Proliferation

⁵⁴ Asia-Pacific Safeguards Network

management system concerning the information processing work in the headquarters and Tokai Safeguards Center.

**Chapter 4 Ensuring safety in decommissioning of the
Tokyo Electric Power Fukushima Daiichi Nuclear
Power Plant and making the causes of the accident
clear**

○Summary of Chapter 4

(Oversight of Efforts to Decommission Reactor)

The NRA reviewed applications submitted by TEPCO for approval of changes to the “Implementation Plan pertaining to Specified Nuclear Facility of the Fukushima Daiichi NPS” and approved 17 of them in FY 2024.

Oversight of the efforts of TEPCO to comply with the Implementation Plan approved to date is conducted through operational safety inspections, pre-service inspections, welding inspections, periodic facility inspections, security inspections, and daily patrol activities by nuclear operation inspectors stationed near the site. Concerning four cases that occurred in series from FY 2023 in particular, the NRA Secretariat highlighted that the common background factor was TEPCO’s insufficient risk identification and work management and pointed out that it was necessary not only for TEPCO to take measures for prevention of recurrence of the symptom, but also put in place a viable system for these measures to function continuously and effectively at the 113rd Committee on Oversight and Evaluation of Specified Nuclear Facilities (July 16, 2024). Concerning the corrective actions regarding these individual symptoms and improvement along with the viable system for the background factors related to the above four cases, the NRA confirmed the status of implementation by TEPCO through an operational safety inspection.

The NRA updates the “Mid-term Risk Reduction Target Map for TEPCO’s Fukushima Daiichi Nuclear Power Station” (the Risk Map) (decided on February 18, 2015) in accordance with the progress of the decommissioning work and other factors. In FY 2024, the NRA received a report on the progress of TEPCO concerning the goal shown on the risk map at the 53rd NRA Commission Meeting (January 15, 2025) and approved the revision of the risk map that included reflection of the progress at the 57th FY 2024 NRA Commission Meeting (January 29, 2025).

As new efforts to be made from FY 2024, the NRA started discussion toward improvement of the licensing and inspection concerning the Implementation Plan and discussion as a basic concept of how to ensure safety in a large scale retrieval of fuel debris.

(Analysis of the Accident)

Concerning accident analysis, which is one of the important jurisdictions of the NRA, in FY 2024, based on the approach for future research and analysis of the accident approved at the 84th FY 2022 NRA Commission Meeting (March, 29, 2023), the NRA confirmed the progress status of research and analysis of the accident by TEPCO, conducted on-site investigations while collaborating with TEPCO as necessary, and at the Committee on Accident Analysis of the Fukushima Daiichi Nuclear Power Station,

made an analysis concerning the Unit 1 isolation condenser and studied identification of causes of displacement of the Unit 1 shield plug, and other matters. The NRA also summarized the results of investigation and analysis conducted from January 2023 to March 2024 as “Interim Summary of Investigation and Analysis of TEPCO’s Fukushima Daiichi NPS Accident (FY 2024 edition)” on June 11, 2024. Furthermore, in order to ensure consistency between efforts related to accident analysis and decommissioning, the “Fukushima Daiichi NPS Decommissioning and Accident Investigation Liaison and Coordination Meeting” was held with relevant administrative agencies, and necessary coordination was carried out.

In addition, the NRA dispatched information on the investigation on the TEPCO’s Fukushima Daiichi NPS accident to home and abroad in such meetings, etc. as the Workshop on Shielding Aspects of Accelerators, Targets and Irradiation Facilities (SATIF-16), opinion exchange meeting with U.S.A. (Forensics Meeting), 5th OECD/NEA/FACE Project Meeting, and Atomic Energy Society of Japan 2024 Autumn Convention, and held various discussions with meeting participants.

(Monitoring After TEPCO’s Fukushima Daiichi NPS Accidents)

Based on the “Comprehensive Radiation Monitoring Plan,” the NRA continuously implemented general environmental monitoring throughout Fukushima Prefecture, as well as sea area monitoring around TEPCO’s Fukushima Daiichi NPS and Tokyo Bay. In FY 2024, the NRA implemented sea area monitoring concerning ALPS-treated water and confirmed that concentration of radionuclides in the seawater was not at the level where people and environment are affected. In addition, to secure the reliability and transparency of Japanese monitoring data at sea area, an additional monitoring was newly implemented under the IAEA framework.

Section 1. Oversight of Efforts to Decommission Reactor

1. Approval, Inspection, etc. of the Implementation Plan Pertaining to the Fukushima Daiichi NPS

(1) Approval, Inspection, etc. of the Implementation Plan Pertaining to the Fukushima Daiichi NPS

For implementing appropriate management methods in accordance with the state of the facilities, the NRA designated TEPCO's Fukushima Daiichi NPS as a "Specified Nuclear Facility" on November 7, 2012, and instructed TEPCO to take measures for the operational safety of nuclear power reactor facilities and protection of specified nuclear fuel material. Subsequently, the "Implementation Plan pertaining to Specified Nuclear Facility of the Fukushima Daiichi NPS" (hereinafter the "Implementation Plan") formulated by TEPCO based on this was approved on August 14, 2013, and the measures for the safety of the facilities are implemented according to the Implementation Plan.

In FY 2024, the NRA approved 17 changes to implementation plans, etc. in total, including a trial retrieval from Unit 2 using a telescopic trial retrieval device and installation of the second radioactive material analysis/research building.

The NRA completed 15 pre-service inspections and 11 welding inspections. In addition, the NRA oversaw TEPCO's efforts by focusing on facilities that are considered to be important for maintaining the performance at specified nuclear facilities through periodic facility inspections, and confirmed the safety activities through operational safety inspections, etc. by nuclear operation inspectors stationed near the site. Concerning the protection measures for specified nuclear fuel materials, the NRA conducted security inspections. From the fourth quarter of FY 2023 to the third quarter of FY 2024, three violations of the implementation plan (minor) were confirmed in operational safety inspections, and one violation of the plan was confirmed in security inspections. (for details, see 3. of Section 1)

(2) Discussion toward improvement of licensing and inspections of the Tokyo Electric Power Fukushima Daiichi Nuclear Power Plant

The NRA clarified the issues toward improving the licensing and inspections of Tokyo Electric Power Fukushima Daiichi Nuclear Power Plant at the 42nd NRA Commission Meeting (November 13, 2024) based on the past discussions at Commission Meetings and the results of licensing and inspections conducted so far, and approved how to proceed with the discussion in the future. Then, at the 23rd Technical Meeting for Review of Implementation Plans for Specific Nuclear Facilities (December 5, 2024) (hereinafter "1F technical meeting"), 24th 1F technical meeting (February 4,

2025), and 25th 1F technical meeting (March 5, 2025), the NRA held discussions for improvement with the operator, TEPCO.

Based on these discussions, the NRA approved the general overview of the improvement including drafting review guidance concerning the Implementation Plan review, organizing the framework for the NRA's inspection (hereinafter "Implementation Plan Inspection"), and introduction of methods for nuclear regulatory inspections at the 63rd NRA Commission Meeting (February 19, 2025). After that, the NRA revised the implementation procedure of the Implementation Plan Inspection at the 68th NRA Commission Meeting (March 12, 2025) so as to introduce an implementation procedure that is a method for nuclear regulatory inspections and focuses on the impact on facility safety and other measures as short-term improvement.

(3) Discussion on the Basic Concept of How to Secure Safety in Large Scale Retrieval of Fuel Debris by Nuclear Damage Compensation and Decommissioning Facilitation Corporation and TEPCO

At the 20th NRA Commission Meeting (July 17, 2024), the NRA received an explanation about the status of discussion on a basic concept of how to ensure the safety in large scale retrieval of fuel debris at TEPCO's Daiichi Nuclear Power Plant by the Nuclear Damage Compensation and Decommissioning Facilitation Corporation (hereinafter "NDF") and TEPCO, and exchanged opinions with them.

Based on the opinion exchange, at the 47th NRA Commission Meeting (December 4, 2024), the NRA approved exchange of opinions with TEPCO and NDF at 1F technical meetings and organizing of the ideas for regulations in the future. Then, at the 24th 1F Technical Meeting (February 4, 2025) and 25th 1F Technical Meeting (March 5, 2025), the NRA started discussion with TEPCO and NDF. The NRA is planning to continue discussions into the future to organize the ideas for regulations in the future.

2. Revision of Mid-term Risk Reduction Target Map for TEPCO's Fukushima Daiichi Nuclear Power Station and Overseeing of Reduction Efforts

For the purpose of indicating targets for decommissioning of TEPCO's Fukushima Daiichi NPS, the NRA established the "Mid-term Risk Reduction Target Map for TEPCO's Fukushima Daiichi Nuclear Power Station" (hereinafter "Risk Map") on February 18, 2015, and continuously revises the Risk Map according to the progress of decommissioning work.

At the 59th FY 2023 NRA Commission Meeting (January 17, 2024), based on the current situation where more than ten years have passed since the accident, the risks to be responded to in the short term have been reduced, and the challenges to be addressed

in the mid-to-long term have become more prominent. Therefore, the NRA concretely represented the ideal status for FY 2033 (hereinafter “Ideal Form”) by considering 10 years as a discrete period, and plans to set the targets to be achieved for Ideal Form after hearing views from TEPCO in order to encourage them in their initiative-taking efforts.

In FY 2024, the NRA received a report on the progress of the activity concerning the risk reduction explained below and the evaluation of that progress by the NRA Secretariat at the 53rd NRA Commission Meeting (January 15, 2025), approved a plan to revise the Risk Map based on the progress and inventory changes including some targets shown in the Risk Map that have progressed ahead of or behind schedule, although it was not necessary to change the policy and purpose of the Risk Map March 2024 edition, and at the 57th NRA Commission Meeting (January 29, 2025), the NRA approved the revision of the Risk Map to which the progress will be reflected.

(1) Progress of Efforts in Mid-term Risk Reduction Target Map

Concerning progress toward the targets shown in the Risk Map, at the 115th Committee on Oversight and Evaluation of Specified Nuclear Facilities (hereinafter “1F Committee”) (December 16, 2024), the NRA received a report to the effect that among the short-term targets on the Risk Map that should be achieved by a set time frame, five of six cases whose achievement period is within FY 2024 had progressed smoothly, and for the remaining one case, the target period should be reviewed. The NRA also received a report that the target schedule of five cases that are scheduled to be achieved in the next fiscal year or later should be reviewed for their delayed schedules. The following show the cases that are progressing smoothly and cases whose target time should be reviewed for their delayed schedules.

○Cases that are progressing smoothly (with achievement time in FY 2024)

[Matters related to rubble, etc.]

(i) Start of operation of waste storage (10th building)

Concerning the installation of the 10th solid waste storage building that is related to this target, TEPCO submitted an application for approval of changes in the implementation plan on November 5, 2021 for the purpose of temporarily storing contaminated soil generated in the decommissioning work and rubble stored in containers whose volume has been decreased by volume reduction processing equipment, and the NRA permitted it on February 21, 2023. Based on this permission, among three buildings, TEPCO started operation of solid waste storage building No. 10-A in August 2024 and building No. 10-B in October of the same year. As its future efforts, TEPCO is going to study a plan concerning a facility for

waste transfer for the purpose of eliminating the work of storing waste with up to 1 mSv/h as a temporary measure.

[Matters related to nuclide analysis]

(ii) Start of analysis of waste in Analysis Building No. 1

To study the treatment, disposal method, and safety of rubble and secondary waste from water processing produced in association with the decommissioning work at TEPCO's Fukushima Daiichi Nuclear Power Station, it is necessary to understand the nature of the waste including rubble. TEPCO constructed the first radioactive material analysis/research building (hereinafter "First Analysis Building") in the site of the power plant as a facility for understanding the nature of those kinds of waste. In FY 2024, TEPCO started full-fledged analysis of waste in the First Analysis Building based on the analysis plan. The NRA permitted the changes in the implementation plan concerning the second radioactive material analysis/research building (applied on May 20, 2020) as a facility related to on-site analysis for future fuel debris retrieval on December 18, 2024. TEPCO plans to start its operation in FY 2026.

[Matters related to maintenance/removal of equipment/facility]

(iii) Establishment of method to evaluate the soundness of reactor building

TEPCO is planning to study the method to evaluate the soundness of the reactor buildings of Units 1 to 3 because it is necessary to confirm the soundness of those buildings for the long term until retrieval of fuel debris is complete. As efforts to be made until FY 2024, TEPCO implemented discussions on unmanned/labor-saving investigation methods in high radiation dose areas, the aging deterioration evaluation method for building materials, the method to confirm the trend of aging deterioration of all buildings, and other issues. The NRA Secretariat determined to continue discussion as to from what viewpoint the soundness should be overseen in the future because the technologies concerning these soundness evaluation methods may advance.

(iv) Development of plan concerning the maintenance/removal of decommissioning equipment

As it is necessary for TEPCO to grasp the aging deterioration condition of the facilities that have been used for a long period, which is required for decommissioning, and to appropriately conduct maintenance of functions and

enhancement of reliability through equipment renewal, etc. in use of the Risk Map, the NRA set “Maintenance and Removal of Equipment/Facilities” along with removal of unnecessary equipment as one field on the Risk Map.

Following this setting, TEPCO studied the functions necessary for decommissioning for the current time (about next 10 years) and, based on this discussion, developed an equipment renewal (replacement/modification) plan and an equipment removal/closure plan.

Concerning this plan, the NRA Secretariat and NRA Commissioners pointed out that it is necessary for TEPCO to store records of TEPCO’s discussion to study and establish the plan leave and continuously improve the plan.

[Matters that are important for proceeding with decommissioning work]

(v) Trial retrieval of fuel debris from Unit 2, investigation of containment interior, and characterization

Following changes in the implementation plan concerning trial retrieval of fuel debris from Unit 2 approved on February 5, 2024, the NRA also reviewed the changes in the implementation plan concerning trial retrieval from Unit 2 using a telescopic trial retrieval device applied for by TEPCO on April 22, 2024 in the 1F Technical Meetings and 1F Committees, and approved the changes on May 9, 2024. For trial retrieval work in the future as well, the NRA verifies the fact that the occupational exposure management and relevant equipment were equipped with necessary functions, the nature of the retrieved debris from the accident analysis viewpoint, and others.

○ Matters whose target time should be delayed

[Matters related to water processing waste, etc.]

(i) Start of dewatering of slurry

Concerning the installation of ALPS slurry stabilization processing equipment related to this target, an application for changes in the implementation plan was made on January 7, 2021, and reviews conducted so far revealed that design changes including employment of cells for strengthening the containment function of the equipment became necessary in the course of the licensing. In association with these design changes, it also became necessary to change the installation location to a larger space. As it took time to study a series of these design changes, TEPCO said that the achievement time of this target would be delayed from FY 2026 to FY 2028.

(ii) Start of collection of sludge generated from decontamination devices

Concerning the installation of the waste sludge collection facility related to this target, an application for changes in the implementation plan was made on December 24, 2019, and a relevant review is underway. Concerning one of the main issues of seismic resistance classification, the discussion has concluded, TEPCO has conducted a seismic evaluation of the reviewed design based on this discussion, and is proceeding with review of piping support structure and layout, associated re-analysis, and others. As it is taking time to conduct these works, TEPCO said that the start of collection of waste sludge would be delayed from FY 2027 to FY 2028.

[Matters related to rubble, etc.]

(iii) Installation of melting equipment

TEPCO is planning to conduct volume reduction and decontamination of contaminated metal rubbles by installing melting equipment and then turn them into low-contamination metal block, but as the basic design of negative pressure management equipment that ensures the containment function is taking time, TEPCO said that the equipment installation target time would be delayed from the time span of FY 2027 to FY 2029 to the time span of 2029 to 2031.

[Matters related to countermeasures against contaminated water]

(iv) Start of removal of nuclides from stagnant water

Concerning the installation of filtering equipment at the later stage of cesium adsorption apparatus related to this target, an application for changes in the implementation plan was made on June 27, 2024, and a relevant review is underway. TEPCO conducted partial change of the pre-processing process and added steps as countermeasures against the blocking phenomena observed in a mock-up test and is implementing reflection of those changes to the detailed design, and therefore is planning to review the start timing of operation of this equipment from FY 2025 to FY 2027.

[Relationship of risk reduction in reactor buildings]

(v) Decrease of S/C Water Levels in Units 1 and 3

From the viewpoint of improving the seismic resistance of primary containment vessels and suppression chambers (suppression chambers are pressure suppression chambers located below the primary containment vessel; hereinafter “S/C”) of Units 1 and 3 and reduction of inventory of radioactive materials (amount of radioactive materials), TEPCO is proceeding with efforts to lower the water level in the primary containment vessels and S/C.

Although a certain drop of the S/C water level in Unit 1 was achieved due to the reduction of water amount injected into the reactor, TEPCO is planning to implement further water level decrease by using a water intake system in the future.

On the other hand, TEPCO is planning to lower the S/C water level in Unit 3 after finishing the purging of stagnant gas including hydrogen in the S/C gas phase part. As the stagnant gas purging work is made via the dry well side of the containment and flow rate adjustment, etc. to alleviate the hydrogen concentration rise on the dry well side that occurs temporarily are conducted, it is taking more time than expected. For this reason, TEPCO says it is going to review the water level reduction implementation time from FY 2024 to FY 2025.

(2) Evaluation of progress of risk map by NRA Secretariat

Concerning the progress of the risk map reported by TEPCO, the NRA Secretariat considers that among matters whose target time is to be delayed, targets concerning water processing secondary waste shown in (i) and (ii) have repeatedly gone through delay of achievement time, but as these works involve unprecedented technological difficulties in handling the high radiation dose water processing secondary waste, it is expected that achievement times for those works may be earlier or later to some degree. For this reason, the NRA Secretariat considers that it is not necessary to review the Ideal Form until 2033. TEPCO says that it is going to strengthen the measures concerning the review schedule management for the licensing review applications including the above cases by, for example, periodically having managing staff involved in the review without leaving those cases to the department in charge.

Also concerning (iii) to (v), the NRA Secretariat considered that it was not necessary to review the Ideal Form even with these conditions because those cases were at the stage where TEPCO started to fully take measures and the delayed achievement times were by from 1 to 2 years.

3. Identification of Causes of Violation of Implementation Plan at TEPCO's Fukushima Daiichi NPS, Confirmation of Measures to Prevent Their Recurrence, and others

(1) Violation of implementation plan in operational safety inspection

From the fourth quarter of FY 2023 to the third quarter of FY 2024, three violations of the implementation plan were confirmed in operational safety inspections. The NRA received reports on the overview and evaluation of these symptoms at the 7th FY 2024 NRA Commission Meeting (May 15, 2024) and 25th FY 2024 NRA Commission Meeting (August 21, 2024) as the implementation status of operational safety

inspection.

(i) Leakage of Water Containing Radioactive substances from High Temperature Incinerator Building (incidents reported based on the ACT)

On February 7, 2024, in pipe cleaning work prior to repair work of the bypass valve of the secondary cesium adsorption apparatus installed in the high temperature incinerator building, as filtered water passed through the pipe with the drain valve of the vent line left open, water including system water leaked from the vent port on the east side wall surface of the building.

As a result of the operational safety inspection of this incident, the following were confirmed: the work was started with the responsibilities and roles of departments left vaguely recognized at the work planning stage and work implementation stage, as exemplified by the fact that the written procedures were prepared without confirmation of the site condition and the construction work had been approved with the defects of the procedures undetected by any worker, and the relevant workers only checked the valve numbers and those on the written procedures for coincidence, did not check the condition of the valve, and overlooked the installed caution plate.

At the 7th FY 2024 NRA Commission Meeting (May 15, 2024), the NRA received a report that although the impact of this incident corresponded to “posing some minor impacts (minor)” as the operational safety inspection implementation status in the fourth quarter of FY 2023, when considering the risk in consideration of the radioactive concentration of the substances handled in this work, the incident could pose a serious violation concerning the impact on the surrounding environment in case the detection of the incident delays and leakage continues for a long term.

Concerning incidents reported based on the ACT at TEPCO’s Fukushima Daiichi NPS, the NRA is not going to rate the INES evaluations.

(ii) Activation of fire alarm in response to generation of steam in the additionally-installed miscellaneous solid waste incineration equipment

On February 22, 2024, as the fire alarm was activated due to continuous generation of steam from the waste storage pit (hereinafter “pit”) of additionally-installed miscellaneous solid waste incineration equipment and it became unable to check the site condition, as a result of water injection to the pit, a large amount of radioactive waste was produced in the pit and the equipment became unusable for the long term.

As a result of operational safety inspections, it was confirmed that the risk of fire had not been sufficiently studied in preparation of operation plan, etc., measures including discussion/development of response procedures in the event of generation

of steam in the pit, which could be a sign of accident, had not been sufficiently studied and developed, and the long-term stoppage of the additionally-installed miscellaneous solid waste incineration equipment due to this incident could affect the progress of the decommissioning project.

At the 25th FY 2024 NRA Commission Meeting (August 21, 2024), the NRA received a report that the impact of this incident corresponded to “posing some minor impacts (minor)” as the operational safety inspection implementation status in the first quarter and the judgment of the violation of the implementation plan had been classified as a minor violation (overseeing).

(iii) Stoppage of site power supply system A and deviation from Limiting Condition of Operation in the important seismic isolation building

On April 24, 2024, the cable buried underground was damaged, a worker from a cooperative company who had been engaged in the work was injured, a black out occurred in the important seismic isolation building, and in its restoration work, the gas turbine generator (hereinafter “GTG”) automatically stopped, which caused the power supply in the important seismic isolation building to be lost again and thus the state where the limiting condition of operation are temporarily not satisfied occurred twice.

As a result of an operational safety inspection, it was confirmed that as the work had been conducted while the site condition was insufficiently understood with no risk identification and no discussion on safety measures done at the time of planning the construction, the cable that was transmitting the power was damaged, the worker was burnt, the voltage in the M/C bus line in the important seismic isolation building was lost, the equipment documents had not been fully checked, the power supply configuration of the important seismic isolation building differed from the implementation plan, the setting of limiting condition of operation was not based on the actual power supply configuration, and the work procedures were designed to cause automatic stoppage of GTG and black out at the time of AC power supply restoration.

At the 25th FY 2024 NRA Commission Meeting (August 21, 2024), the NRA received a report that the impact of this incident corresponded to “posing some minor impacts (minor)” as the operational safety inspection implementation status in the first quarter and the judgment of the violation of the implementation plan had been classified as a minor violation (overseeing).

(2) Overseeing of/instruction to TEPCO concerning improvements accompanied

by effective mechanisms

Concerning four cases that consist of the three cases mentioned above and one case of bodily contamination in pipe cleaning work of additionally installed multi-nuclide removal equipment that was judged as a violation of the implementation plan (minor) in February 2024, the NRA Secretariat showed in 113rd 1F Committee (July 16, 2024) that the common background factor was TEPCO's insufficient risk identification and work management and pointed out that simply taking measures against incident recurrence does not function as measures and it is necessary to put in place a viable system for these measures to function sustainably and effectively.

Concerning the corrective actions regarding these individual symptoms and improvement with a viable system for the background factors related to the above four cases, the NRA confirmed the implementation status by TEPCO through an operational safety inspection and, concerning establishment of an effective system in particular, the NRA continues to intensively check the following four points.

- Establishment of continuous and effective CAP activity system
- Planning of activities toward improvement (achievement targets, resource distribution (human resources and time in particular), planning concerning field-based improvements, etc.)
- Evaluation index (index to be set by TEPCO in order to evaluate that the improvement activity is effective and effectively functioning)
- Evaluation of activity and plan toward continuous improvement

The NRA received a report on TEPCO's work inspection and efforts based on common factory analysis concerning these four incidents at the 114th 1F Committee (October 28, 2024), and is going to continuously oversee the efficacy of TEPCO's efforts and give TEPCO's relevant guidance.

(3) Violation of implementation plan in physical protection inspections

From the fourth quarter of FY 2023 to the third quarter of FY 2024, one violation of the implementation plan was confirmed in physical protection inspections. The NRA received a report on the overview and evaluation of this incident at the 46th NRA Commission Meeting (November 27, 2024) .

(i) Breach of protection measures stipulated in information security plan

In the physical protection inspection implemented in September 2024, the NRA confirmed that the protection measures stipulated in the information system security plan that stipulates the protection measures against unauthorized connection, etc. to the information system (hereinafter "unauthorized connection, etc.") were not

implemented, and in the information system related to the operation of equipment or devices necessary for the protection of specific nuclear fuel materials (hereinafter “PPS⁵⁵”), it may not be possible to promptly and positively respond to unauthorized connection, etc.

As a result of a comprehensive evaluation of the type and degree of impact on protection measures based on the implementation plan inspection implementation procedures, the NRA judged that although there had been an impact on the protection measures including the possibility of failure to promptly and positively respond to the unauthorized connection, etc. to PPS, the degree of impact was limited and extremely small and as the impact can be expected to be improved through improvement measures by the operator, the impact corresponded to “posing some minor impacts (minor)” and the violation of the implementation plan was classified as a minor violation (overseeing).

Section 2. Analysis of the Accident

1. Continuous Analysis of the Accident

Accident analysis is one of the important jurisdictions of the NRA which carries out investigations and analyses from a technological viewpoint.

The NRA decided on the implementation policy and system for supplemental investigation and analysis at the 28th FY 2019 NRA Commission Meeting (September 11, 2019) based on the fact that accessibility inside the reactor building has been enhanced due to the improvement of the site environment and progress in the decommissioning work, and that it has become possible to check the condition of the facility and collect samples. Following this, in the “Committee on Accident Analysis of Fukushima Daiichi Nuclear Power Station” (hereinafter “Accident Analysis Review Committee”) in which external experts also participated, the NRA conducted research and analysis using the results of the on-site investigation and records and other sources at the time of the accident at TEPCO’s Fukushima Daiichi NPS.

In FY 2024, based on the approach for future research and analysis of the accident which was approved at the 84th FY 2022 NRA Commission Meeting (March, 29, 2023), the NRA confirmed the progress of research and analysis of the accident by TEPCO, conducted 20 on-site investigations while coordinating with TEPCO and other organizations as necessary, held 6 Accident Analysis Review Committees, analyzed the Unit 1 isolation condenser (hereinafter “Unit 1 IC”), and discussed identification of the cause of displacement of the Unit 1 shield plug, and other matters.

⁵⁵ Physical Protection System

Concerning Unit 1 IC, the NRA organized pieces of information including the system configuration, startup history in the event of accident, transition of reactor pressure, and contents of TEPCO's investigation report concerning IC, and analyzed the cause of decrease of water retained in the system A IC tank by about 20 tons post-tsunami. The heat quantity considered to be lost from the corresponding system that was presumed based on the amount of retained water reduced from the tank is almost same as the heat quantity removed from the system at the time of operation of system A IC from immediately after the earthquake to 15:34, which is a huge heat quantity. For this reason, it is very important to identify the cause of the reduction of the retained water from the tank in terms of clarifying the behavior of the IC at the time of the accident. As a result of this analysis, the following has been clarified:

- Concerning the time period in which the retained water in the system A IC tank was reduced, as it is considered that water injection to the reactor of Unit 1 was almost not done in the period from March 11 to March 23, 2011, it is unlikely that the retained water was reduced in this period because the quantity of steam was highly possibly insufficient in the reactor core, and it is highly likely that steam began to be generated in the reactor due to the water injection via the water supply system that started on the same day. Therefore, it is highly probable that the retained water decreased from March 23 onward.
- Concerning the mechanism of the decrease of retained water in the tank, the NRA clarified that, although its investigation is still underway, as the pressure in the primary containment vessel and containment increased due to the generation of steam because of water injection to the reactor on the same day or later, some of the steam flowed into the system A IC pipe, which lead to temporary restoration of the heat removal function of the IC and thus the retained water in the tank was reduced.

For the identification of the cause of the displacement of the Unit 1 shield plug, the NRA held discussions based on a hypothesis that can be assumed concerning the cause of the displacement. As a result, an analysis on the assumption of the hydrogen explosion that occurred on the operating floor on the fifth floor of the reactor building could not reproduce the result of an investigation related to the displacement of the shield plug conducted by TEPCO. On the other hand, in an analysis on the assumption that the hydrogen explosion occurred in the reactor well below the shield plug, the result of the above investigation could be qualitatively reproduced. Therefore, it was clarified that a hydrogen explosion in the reactor well was highly likely the cause of the displacement of the shield plug.

The NRA also summarized the results of investigations and analyses conducted from January 2023 to March 2024 as “Interim Summary of Investigation and Analysis of TEPCO’s Fukushima Daiichi NPS Accident (FY 2024 edition)” at the 46th Accident Analysis Review Committee (June 11, 2024).

Furthermore, in order to ensure consistency between works related to accident analysis and decommissioning, in FY 2024, the “Fukushima Daiichi NPS Decommissioning and Accident Investigation Liaison and Coordination Meeting” was held once on August 5, 2024 with the participation of the Agency for Natural Resources and Energy, the NDF, TEPCO, and the NRA Secretariat, and necessary coordination on the implementation time of dose rate measurement of stand-by gas treatment system (SGTS) pipe in Unit 1, analysis method of carbon’s radioactive isotopes (C-14) included in solid waste, sharing of 3D data information obtained in the reactor building, and other matters was carried out.

2. Efforts to Disseminate Information About Analysis of TEPCO’s Fukushima Daiichi NPS Accident

The NRA disseminates information on the accident analysis both domestically and internationally.

In FY 2024, concerning the matters that had been clarified in investigations in FY 2023 and the topics on analysis of the TEPCO’s Fukushima Daiichi NPS accident, the NRA dispatched information four times at domestic and international meetings, etc. as the Workshop on Shielding Aspects of Accelerators, Targets and Irradiation Facilities (SATIF-16), opinion exchange meeting with the U.S.A. (Forensics Meeting), 5th OECD/NEA/FACE Project Meeting, and Atomic Energy Society of Japan 2024 Autumn Convention, and held various discussions with meeting participants.

Section 3. Conducting Radiation Monitoring

1. Implementation of Radiation Monitoring of Land and Sea Areas in Response to TEPCO’s Fukushima Daiichi NPS Accident

The NRA engaged in post-accident radiation monitoring of TEPCO’s Fukushima Daiichi NPS according to the Comprehensive Radiation Monitoring Plan (established at the Monitoring Coordination Meeting on August 2, 2011 and revised on March 28, 2025) including general environmental monitoring throughout Fukushima Prefecture and the sea area monitoring around TEPCO’s Fukushima Daiichi NPS and of Tokyo Bay, and released the analysis results every quarter of the fiscal year on the NRA website. The NRA is also monitoring details of difficult-to-return zones and released the results on the NRA website.

(1) Long-term Perspective on the Distribution of Radioactive substances in Fukushima and Neighboring Prefectures

Air-borne monitoring was conducted in Fukushima Prefecture and neighboring prefectures, and a distribution map of air dose rates in Fukushima Prefecture and neighboring prefectures based on the monitoring was published on the website of the NRA on February 28, 2025. The NRA also released the distribution status of air dose rates by driving surveys, the results of survey on radioactive cesium deposition in soil in Fukushima and neighboring prefectures and other matters on the NRA website on December 20, 2024.

The JAEA developed a new exposure evaluation technology for the safety of residents (real dose prediction model based on resident's lifestyle behavior developed in Fukushima: lifestyle behavior pattern), toward termination of the evacuation order in the difficult-to-return zone after the TEPCO's Fukushima Daiichi NPS Accident. An article on its result was published in an international science magazine. This evaluation technology is a method of simulations based on the result of environmental radiation monitoring, GPS location information, and parameters such as indoor shading coefficient. This evaluation is possible even without actual measurement by means of a personal dose meter and others. This result was published on the JAEA website as a press release.

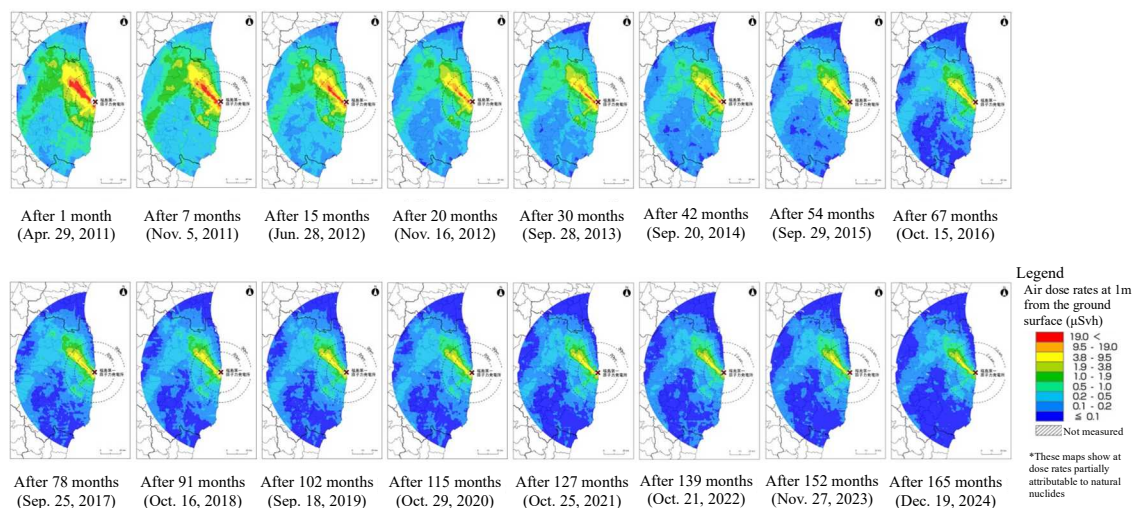


Figure 4-1. Changes in Air Dose Rate Distribution Map within 80 km Zone

(2) Measuring Air Dose Rates in Fukushima and Neighboring Prefectures through Monitoring Posts

At the request of local governments, the air dose rates are measured continuously with about 700 Monitoring Posts and about 3,000 Real-time Dose Measuring Systems installed at public locations, such as schools in Fukushima and its neighboring prefectures. The results are released on the NRA website in real time. In order to maintain stable measurements, the NRA is systematically implementing renewal of devices or replacement of main parts on extremely aged devices. In response to scheduled termination of the current communication service used to transmit monitoring post data at the end of FY 2025, the NRA proceeded with measures including replacement of main parts so that new LTE communication can be used.

(3) Sea Area Monitoring

Based on the “Comprehensive Radiation Monitoring Plan,” the relevant organizations are cooperating to conduct sea area monitoring. The NRA collects seawater and sediment from nearshore, coastal, offshore, and the open sea near TEPCO’s Fukushima Daiichi NPS and from Tokyo Bay. The NRA analyzes the radioactivity in those samples, and releases the results on the NRA website.

Based on the Government Policy decided on April 13, 2021, the government and TEPCO were to strengthen and enhance monitoring at TEPCO’s Fukushima Daiichi NPS. Following this decision, in FY 2024, the NRA implemented the strengthened and enhanced monitoring, confirmed that concentration of radionuclides in the seawater was not at the level where people and environment are affected, and submitted a report to the expert meeting concerning sea area monitoring on ALPS-treated water.

On February 27, 2025, the NRA held the 5th Sea Area Environment Monitoring/Measurement Task Force meeting was held, and the members of the meeting shared the recognition that as a result of monitoring the sea area for one year post-release of ALPS-treated water into the sea conducted by the Ministry of the Environment, NRA, Fisheries Agency, Fukushima Prefecture, and TEPCO, concentration of radionuclides in the seawater was not at the level where people and environment are affected

As efforts toward dispatch of information to overseas, since 2014, the NRA has been conducting joint sampling of specimen from sea area around TEPCO’s Fukushima Daiichi NPS with IAEA and inter laboratory comparison of analysis results so as to ensure the reliability and transparency of Japanese monitoring data of sea area. Since 2022, the NRA has also been conducting inter-laboratory comparison among laboratories in corroboration of sea area monitoring concerning ALPS-treated water at

TEPCO's Fukushima Daiichi NPS. From October 7 to 11, 2024, experts from IAEA and analytical laboratories of third-party countries visited Japan to confirm the status of sample collection and other activities. In September 2024, it was agreed upon between Japan and the IAEA to conduct additional measures under the IAEA framework based on the interests of concerned states, and s, additional measures was implemented under the IAEA framework and participating laboratories conducted water sampling and other work in October 2024 and February 2025.

The second IAEA review after discharging ALPS-treated water into the sea was implemented from April 23 to 26, 2024, and then from December 9 to 12, 2024, the third IAEA review after discharging of ALPS-treated water into the sea was implemented. IAEA says in its reports that it did not recognize any such matter inconsistent with the international safety standard requirements.

Chapter 5 Appropriately implementing radiation protection measures and emergency responses

○Summary of Chapter 5

(Promotion of Radiation Protection Measures)

The Radiation Council, in response to consultation concerning the standards, etc. concerning use of the recycled removed soil by the Minister of the Environment, made a report. The NRA also conducted follow-up concerning review, etc. of the equivalent dose limit for the lens of the eye, review on development of the new report, “The basic concepts of radiation protection about Naturally Occurring Radioactive Material,” review on the revision of “Guidelines for the Management of Cosmic Ray Exposure of Aircraft Crew,” and organized technical matters for which the effective dose coefficient and other items need to be studied.

(Implementation and Continuous Improvement of Regulations Under the Radioisotope Regulation Act)

The NRA reviewed applications for permission and approval, and inspected operators regarding the use, sale, lease, waste management and other handling of radioisotopes, use of radiation generators, disposal of radioactively contaminated objects and other handling based on the Radioisotope Regulation Act.

To eliminate double regulations under the Medical Care Act (Act No. 205 of 1948) and the Act on the Regulation of Radioisotopes, etc. for medical devices using unsealed radioisotopes (Y-90 microspheres for the treatment of hepatocellular carcinoma, etc.), the NRA proceeded with revision of the notification that specifies devices exempt from application of the Act on the Regulation of Radioisotopes, etc.

(Continuous Improvement of the NRA Guide for Emergency Preparedness and Response)

At the 31st FY 2024 NRA Commission Meeting (September 11, 2024), the NRA revised the Guideline for Nuclear Emergency Preparedness and Response and newly set a framework in which the national government designates medical cooperation institutions for nuclear emergency with a nationwide activity system based on the designation requirements, and at the 62nd FY 2024 NRA Commission Meeting (February 12, 2025), the NRA designated the Japan Association of Radiological Technologists based on this framework.

The NRA re-organized new challenges that had been found in the course of revisions of the Guideline for Nuclear Emergency Preparedness and Response and relevant regulations concerning EAL reviews conducted so far and challenges left unsolved as matters subject to mid- and long-term discussion, and continuously addressed the discussions on them.

The NRA held nine discussion team meetings on the operation of sheltering in place in the event of a nuclear accident, discussed the scope of sheltering, timing to continue

sheltering, matters to be considered in judgment of cancellation or switch to evacuation, and other issues, and then summarized a report. Afterwards, at the 1st FY 2025 NRA meeting (April 2, 2025), the NRA, having received the report, determined to revise the Guideline for Nuclear Emergency Preparedness and Response and further strengthen coordination with the relevant ministries and agencies concerning response to complex disasters.

(Establishment and Operation of Crisis Management System)

In response to the Nankai Trough Earthquake Information announcement on August 8, 2024, which was the first response since the operation of the crisis management system, the NRA alerted operators concerning nuclear facilities located in specified municipalities at countermeasure promotion areas against the Nankai trough earthquake as well as NRA Regional Offices in those locations.

Taking lessons from the FY 2023 Nuclear Energy Disaster Prevention Drill conducted in October 2023, the NRA revised the “Nuclear Emergency Response Manual” along with the Nuclear Disaster Management Bureau, Cabinet Office on July 2, 2024.

To enhance emergency response capabilities, the NRA conducted tabletop exercises for emergency response, focusing on decision-makers such as the NRA Chairman, Commissioners, and the Secretariat of the NRA (twice). In addition, NRA Commissioners participated in some emergency drills by nuclear operators. In nuclear operation disaster prevention training, the NRA made efforts to improve the capabilities of the functional units of the nuclear operators and ERC Team by implementing training simulating simultaneous occurrence of disasters at multiple nuclear sites in the same area due to a large-scale natural disaster and a training to confirm off-site response procedures based on scenarios and the day’s flow of operator disaster preparedness training. Moreover, efforts were made in the implementation and evaluation of training, identification and improvement of challenges obtained through training and strengthening of communication network facilities and systems.

The NRA received a report on the results of FY 2023 Emergency Drills by Nuclear Operators at the 25th FY 2024 NRA Commission Meeting (August 21, 2024). Regarding Commercial Power Reactor facilities, views on the desired status of training and regulatory involvement for the purpose of training to improve the ability for emergency response have been proceeding since FW2021. It is determined that further flexible and voluntary training is to be promoted, that the policies to improve effectiveness of training are to be reflected in the training implementation policy of FY 2024, and the FY 2024 training was implemented.

(Conducting Radiation Monitoring)

The NRA establishes the “Radiation Monitoring Information Sharing and Publication System (RAMIS)” aimed at aggregating results of emergency monitoring, sharing them among the parties concerned and disclosing relevant information promptly, in the event of a nuclear emergency. The NRA publishes monitoring information on a routine basis using the system. The NRA also continuously measures environmental radiation dose levels nationwide and publishes the results on its website.

In order to implement new technologies in the radiation monitoring field and establish a more robust and agile radiation monitoring system, the NRA has developed the advanced radiation monitoring system concept and proceeded with efforts toward the realization of mobile monitoring for quick and detailed nuclear emergency response and of monitoring with robustness and various means sustaining in the event of complex disaster. The NRA also proceeded with efforts that contribute to labor-saving, cost reduction, and digital transformation of monitoring.

The NRA holds meetings of the Technical Study Team on Environmental Radiation Monitoring, which is engaged in continuous studies on technical aspects of monitoring, twice in FY 2024.

Concerning the Kinki University's Nuclear Reactor, which is specified as “other nuclear facility” by the Guideline for Nuclear Emergency Preparedness and Response, the NRA also specified the scope of implementation and main implementation items for monitoring in the area around the facility during normal times that must be conducted at least by the local government.

Section 1. Promotion of Radiation Protection Measures

1. Investigation and Deliberation by the Radiation Council

The NRA has established the Radiation Council, based on the law (Law No. 162 of 1958) related to technical standards for prevention of radiation hazards. The purpose of the Radiation Council is to ensure uniformity in technical standards for prevention of radiation hazards.

The Radiation Council held the general meeting five times, reviewed the consultation from the Minister of the Environment concerning development of technical standards for prevention of radiation hazards based on a provision of the Act on Special Measures Concerning Response to Environmental Pollution by Radioactive Materials Emitted due to Accident of Nuclear Power Plant in Association with the Tohoku Earthquake out at Pacific Ocean on March 11, 2011 (Act No. 110 of 2011), and made a report to the effect that the standards are appropriate.

In addition, to address issues highlighted in the report related to the review of the equivalent dose limit for the lens of the eye, it conducted follow-up discussions on the operation after amendments to regulations such as the Regulation on Prevention of Ionizing Radiation Hazards (Ordinance No. 41 of the Ministry of Labour, 1972). The Council also received reports from the Secretariat of the NRA on international developments in radiation protection. Toward revision of the report “The Basic Concepts of Radiation Protection about Naturally Occurring Radioactive Material,” the NRA also received reports on the trend of measures, etc. on indoor radon taken by foreign countries and associated health risks from external experts and held a review on development of a new report, “Basic Idea on Radiation Protection against Naturally Occurring Radioactive Materials.”

Furthermore, the NRA set up the Subcommittee of Cosmic Radiation Protection for Aircraft Crew toward revision of the “Guidelines for the Management of Cosmic Ray Exposure of Aircraft Crew,” and held a meeting once. Concerning incorporation of the ICRP 2007 recommendations to the domestic system and others, the NRA organized technical matters for which discussion concerning the effective dose coefficient and others is necessary, and set up two study groups on external and internal exposure, respectively.

Section 2. Implementation and Continuous Improvement of Regulations Under the Radioisotope Regulation Act

1. Rigorous and Proper Implementation of the Radioisotope Regulation Act

To prevent radiation hazards due to the use of radioisotopes or radiation generators, and ensure public safety by protecting specific radioisotopes, the NRA regulates the use,

sale, lease, waste management and other handling of radioisotopes, the use of radiation generators, and the disposal of radioactively contaminated objects, etc. based on the Radioisotope Regulation Act.

The implementation status of these regulations is as follows:

(1) Applications and Notifications

In FY 2024, there were 8,133 applications and notifications based on the Radioisotope Regulation Act. The number of certificates issued for Radiation Protection Supervisors were 496 for first- class, 221 for second-class, and 281 for third-class in FY 2024.

(2) Inspection

The NRA carried out 216 inspections for radiation hazard prevention and 90 inspections for security of specified radioisotopes in FY 2024.

(3) Confirmation of Causes and Preventive Measures for Problems in Operator's Site

Based on the Act, operators must report to the NRA when an incident under obligation to report occurs. The NRA implements cause investigation and confirmation of measures to prevent recurrence concerning events at their sites. Among 10 incidents reported based on the Act that reported in FY 2022 and FY 2023, the NRA conducted INES evaluation on the 6 cases of (i) to (v) and (vii).

(i) Leakage of Radioisotopes Outside the Controlled Area at Sekisui Medical

On August 5, 2022, Sekisui Medical reported a leakage of radioisotopes outside the controlled area at its Drug Development Solutions Center in Ibaraki Prefecture. As of November 22, 2023, the company submitted a report regarding the causes of the incident and corrective measures. The NRA evaluated this incident as Level 0 (an event of no safety significance) at the 10th meeting of the NRA in FY2024, held on May 22, 2024.

(ii) Unplanned Exposure of Radiation Workers at WITHSOL

On October 16, 2022, WITHSOL reported that unplanned exposure of radiation workers occurred at its oil refinery in Ibaraki Prefecture. As of September 21, 2023, WITHSOL submitted a report regarding the causes of the incident and corrective measures (supplemented on October 3, 2023). The NRA evaluated this incident as Level 1 (Anomaly) at the 10th meeting of the NRA in FY2024, held on May 22, 2024.

(iii) Leakage of Radioisotopes Outside the Controlled Area at Tohoku Medical and Pharmaceutical University

On December 23, 2022, Tohoku Medical and Pharmaceutical University reported a leakage of radioisotopes outside the controlled area at its Komatsushima Campus in Miyagi Prefecture. As of February 19, 2024, the university submitted a report regarding the causes of the incident and corrective measures. The NRA evaluated this incident as Level 0 (an event of no safety significance) at the 10th meeting of the NRA in FY2024, held on May 22, 2024.

(iv) Loss of Radioisotopes at Nippon Soda

On February 7, 2023, Nippon Soda reported the loss of radioisotopes at their Odawara Research Institute in Kanagawa Prefecture. As of December 14, 2023, Nippon Soda submitted a report regarding the causes of the incident and corrective measures. The NRA evaluated this incident as Level 0 (an event of no safety significance) at the 10th meeting of the NRA in FY2024, held on May 22, 2024.

(v) Loss of Radioisotopes at Prefectural University of Kumamoto

On May 12, 2023, Prefectural University of Kumamoto reported loss of radioisotopes in its Faculty of Environmental & Symbiotic Sciences of the University in, Kumamoto Prefecture. As of December 14, 2023, the university submitted a report regarding the causes of the incident and corrective measures. The NRA evaluated this incident as Level 0 (an event of no safety significance) at the 10th meeting of the NRA in FY2024, held on May 22, 2024.

(vi) Unplanned Exposure of Radioactive Workers at TECHNOS MIHARA

On August 3, 2023, TECHNOS MIHARA reported unplanned exposure of radiation workers at the irradiation chamber of their factory in Hiroshima Prefecture. As of August 9, 2024, the company submitted a report regarding the causes of the incident and corrective measures (supplemented on October 16, 2024).

The report states that, based on their evaluation results for effective dose, equivalent dose to the lens of the eye, and equivalent dose to the skin, the two radiation workers who received unplanned exposure did not exceed the annual dose limits. The causes of the exposure were identified as performing imaging work without confirming that the source was contained in the designated container, and failing to evacuate outside the irradiation room during gamma-ray exposure.

As preventive measures, the company decided to provide training to ensure

compliance with procedures, review equipment such as installing automatic alarm systems, and revise their Radiation Prevention Program and relevant internal rules.

(vii) Leakage due to damage of sealed radioisotopes at Fukuoka Prefectural Police's First Riot Police Unit

On October 5, 2023, Fukuoka Prefectural Police's First Riot Police Unit reported a leakage of radioisotopes outside the controlled area at the Japan Ground Self-Defense Forces Kirishima Training Area in Miyazaki Prefecture. As of November 16, 2023, the unit submitted a report regarding the causes of the incident and corrective measures. The NRA evaluated this incident as Level 0 (an event of no safety significance) at the 10th meeting of the NRA in FY2024, held on May 22, 2024.

(viii) Loss of Radioisotopes at Tsukuba University

On October 31, 2023, Tsukuba University reported loss of radioisotopes at its Institute of Life and Environmental Sciences in Ibaraki Prefecture. As of March 24, 2025, the university submitted a report regarding the causes of the incident and corrective measures.

According to the report, in view of the fact that beta particles emitted from Nickel-63 have a short range in air and can be shielded by a thin metal plate, and that the source was melted together with other metal scraps, resulting in sufficient dilution and coating by other metallic elements, the beta rays was effectively shielded. Therefore, it was concluded that there was no impact on human health or the environment.

The causes of the loss of control were identified as inadequate awareness by the user regarding certified devices with a label, overlooking the signs indicating that the equipment contained a radiation source at the time of disposal, and failing to conduct follow-up investigations for users who did not respond, despite annual on-campus inspections to confirm the presence of sources.

As preventive measures, the university decided to provide re-education on the handling of certified devices with a label to both users and asset management staff of the relevant departments, prepare a list of equipment requiring special attention for storage and disposal, affix seals indicating such equipment, and verify items through the accounting system at the time of disposal.

(ix) Leakage of Radioisotopes in the Controlled Area at Hokuetsu Corporation

On November 13, 2023, Hokuetsu Corporation reported a leakage of radioisotopes in the controlled area at their Osaka Plant in Osaka Prefecture. As of February 5, 2025, the company submitted a report regarding the causes of the incident and corrective

measures.

According to the report, based on the dose measurement around the controlled area, evaluation of air concentration of radioisotopes outside the controlled area, and evaluation of worker exposure, there are no impacts on humans health or the environment. The cause of the leakage was identified as the adhesion of fine particles to the sealed source during the welding process at the time of manufacture, and the subsequent formation of cracks due to changes in temperature and internal pressure during use, as well as vibration or shock.

As preventive measures, the manufacturer decided to weld the source with a protective cover and add inspection items capable of detecting fine particles. In addition, the company confirmed at the time of delivery, through the inspection report provided by the manufacturer, that the product was normal and that corrective actions for the incident had been implemented, and also decided to check the signal values of the basis weight gauge during routine inspections.

(x) Loss of Radioisotopes at RIKEN KEIKI

On March 12, 2024, RIKEN KEIKI reported loss of radioisotopes at Development Center in Saitama Prefecture. As of August 19, 2024, the company submitted a report regarding the causes of the incident and corrective measures.

According to the report, based on the evaluation of the effective dose and the 1 cm dose equivalent rate at a distance of 10 centimeters from the source over one year, it was concluded that there was no impact on human health or the environment.

The cause of the loss of control was identified as insufficient development of procedures and manuals for proper handling of the source, as well as inadequate training and education.

As preventive measures, the company decided to review and revise the handling procedures and manuals for the source.

In FY 2024, there were 7 incidents reported based on the Act, all of which were evaluated as unlikely to cause radiation hazards to workers or the public. The summaries are as follows.

(i) Loss of Radioisotopes at Japan Coast Guard

At around 17:47 on January 2, 2024, on the Runway C of Haneda Airport, a Bombardier aircraft DHC-8-315 model JA722A belonging to Japan Coast Guard and Japan Airlines Flight JAL516 collided and burst into flames.

On May 20, 2024, Japan Coast Guard reported that, as a result of the accident, five emergency exit signs containing tritium (312.65 GBq) and a single exciter containing

Krypton-85 (107.7 kBq), which had been installed on the aircraft, were missing. The event was therefore determined to constitute a reportable incident under the Act (loss of radioisotopes).

Currently, the Japan Transport Safety Board is investigating the cause of the accident, and based on the findings, Japan Coast Guard will consider preventive measures.

(ii) Unplanned Exposure of Radiation Workers at Japan Dresser

On August 1, 2024, Japan Dresser reported that a radiation worker at Kariwa Facility (Kariwa Village, Kariwa District, Niigata Prefecture) received an exposure exceeding 5 mSv while performing nondestructive testing of castings using a gamma-ray transmission testing device containing a sealed Cobalt-60 source (gamma emitter, 185 GBq) within the controlled area. The incident was determined to constitute a reportable incident under the Act (unplanned exposure).

The company is currently investigating the causes and considering preventive measures.

(iii) Exposure of radiation worker at PDRadiopharma that could have exceeded the dose limit

On October 3, 2024, PDRadiopharma reported that an incident in its Kawasaki Laboratory (Kawasaki City, Kanagawa Prefecture), a radiation worker was potentially exposed to a dose exceeding the equivalent dose limit for the lens of the eye. The incident occurred during the calibration of a radiation detector installed in a synthesis module for Fluorine-18-labeled radiopharmaceuticals, using an unsealed source of Fluorine-18 (used for positron emission tomography), with an activity of 293 GBq.

The company is currently investigating the causes and considering preventive measures.

(iv) Leakage of Radioisotopes Outside the Controlled Area at University of Toyama

On November 14, 2024, University of Toyama reported that a metal container considered to hold radioactive material was found at the private residence of a former faculty member (deceased) in Toyama Prefecture. Measurements of contamination on the container surface and at the storage location revealed the presence of Carbon-14 and tritium on the container, and Carbon-14 contamination at the storage site. The university determined that this incident meets the criteria for a legally reportable incident (leakage outside a controlled area).

The University is currently investigating the cause and considering preventive

measures.

(v) Loss of Radioisotopes at Tokai Analysis

On November 19, 2024, Tokai Analysis reported that a gas chromatograph equipped with an electron capture detector (ECD) containing a sealed radiation source (Nickel-63, 370 MBq) had been lost at Gamagori Laboratory (Gamagori City, Aichi Prefecture). Despite search efforts, the device could not be located. The company determined that this event meets the criteria for a legally reportable incident (loss of radioisotopes).

The company is currently investigating the causes and considering preventive measures.

(vi) Leakage of Radioisotopes in Controlled Area at Nihon Medi-Physics

On March 8, 2025, Nihon Medi-Physics reported that, at Chiba Plant (Sodegaura City, Chiba Prefecture), a radiation worker handled a radioisotope (Molybdenum-99, 10.151 TBq) in a hot cell (shielded room equipped with a system that has a radioisotope sealing function and remote operation is possible) while the exhaust system for the workroom and the hot cell was out of operation. When the hot cell was subsequently opened, radioactive material leaked into the workroom. The company determined that this incident meets the criteria for a legally reportable incident (leakage of radioisotopes in controlled area).

The company is currently investigating the causes and considering preventive measures.

(vii) Leakage of Radioisotopes in a Controlled Area at Nippon Paper Industries

On March 25, 2025, Nippon Paper Industries reported that, at the Radiation Equipment Room (a controlled area) of its Research Building within the Research and Development Division (Kita-ku, Tokyo), a significant decrease was observed in both the signal output and the radiation level of a basis weight gauge (used for measuring paper weight) equipped with a sealed radiation source (Krypton-85, 7.4 GBq). The signal dropped from the normal 8.0 volts to 0.3 volts, and the radiation level at the source surface decreased from the normal 1.5 μ Sv per hour to 0.1 μ Sv per hour. Based on these findings, the company concluded that the sealed radiation source had leaked within the Radiation Equipment Room.

The company determined that this event meets the criteria for a legally reportable incident (leakage within a controlled area).

The company is currently investigating the causes and considering preventive measures.

2. Continuous Improvement of Regulation under the Radioisotope Regulation Act

(1) Efforts Regarding the Resolution of Double Regulations for Unapproved Radiopharmaceuticals and Similar Items

The Ministry of Health, Labor and Welfare amended the Enforcement Regulations on the Medical Care Act (Order of the Ministry of Health and Welfare No. 50 of 1948) through (Ordinance of the Ministry of Health, Labor and Welfare No. 21 of 2025) to add medical devices using unsealed radioisotopes (Y-90 microspheres for the treatment of hepatocellular carcinoma, etc.) subject to the regulations for radiation protection under the Medical Care Act. As a result, this device subject to overlapping radiation protection requirements under both the Medical Care Act and the Radioisotope Regulation Act. Therefore, to resolve this condition, the NRA proceeded with the revision of “Ministerial Public Notice on Designation of Devices not Subject to Laws Concerning Regulations on Radioisotopes Specified by the Nuclear Regulation Authority in Accordance with Article 1 item 2 of Order for Enforcement of the Act on the Regulation of Radioisotopes, etc.”

(2) Development of Guidelines under the Radioisotope Regulation Act

In response to the gradual enforcement of the Radiation Regulation Act, which was amended in 2017, the NRA has been developing guidelines related to the Radioisotope Regulation Act that include references which the NRA uses when it assesses compliance with regulatory requirements stipulated in the Act.

The guidelines for reviews and on-site inspections established on March 29, 2023 compile “viewpoints of confirmation” concerning the Act on the Regulation of Radioisotopes, etc. In order that use of those guidelines confirms the effectiveness of those viewpoints and contributes to better foreseeability for permission users, etc., the NRA raised awareness of the guidelines upon on-site inspections.

(3) Response to The Action Plan for Promotion of Production and Utilization of Medical Radioisotopes

The Cabinet Office reported the progress on relevant ministries and agencies in FY 2023 regarding implementation of actions based on “The Action Plan for Promotion of Production and Utilization of Medical Radioisotopes” decided by the Japan Atomic Energy Commission in 2022, in their regular meeting. In the report, it is indicated that the NRA will consider improving the regulations as necessary, based on the progress in the use of radioisotopes in the medical field and the deliberations of relevant ministries

and agencies. In FY 2024, the NRA Secretariat received updates from the Ministry of Health, Labor and Welfare on its ongoing considerations.

Section 3. Continuous Improvement of the NRA Guide for Emergency Preparedness and Response

1. Revision of the NRA Guide for Emergency Preparedness and Response

Based on the Nuclear Emergency Act, the NRA has developed the NRA Guide for Emergency Preparedness and Response to ensure smooth implementation of nuclear emergency response to be taken by nuclear operators, the national government, and local governments, etc. The Guide is to be continuously improved based on newly acquired knowledge, the status of efforts by local governments and the results of nuclear emergency drills.

(1) Establishment of a framework in which the medical cooperation institution for nuclear emergency is designated by the national government

In order to establish a system by which dispatch of staff is arranged on a nationwide scale, which includes prefectures other than prefectures where nuclear facilities are located, in the event of nuclear accident, at the 20th FY 2024 NRA Commission Meeting (July 17, 2024), the NRA reviewed a revision draft of the Guideline for Nuclear Emergency Preparedness and Response that adds a framework in which the medical cooperation institution for nuclear emergency with nationwide activity system is designated by the national government, implemented solicitation of public comments, and determined the revision at the 31st FY 2024 NRA Commission Meeting (September 11, 2024). At the same time, the NRA approved the revision of “Roles of Nuclear Emergency Core Hospitals, etc. and their Designation Requirements.”

In response to the public offering for medical cooperation institution for nuclear emergency to be designated by the national government, the Japan Association of Radiological Technologists made an application, and the NRA confirmed the application in accordance with “Roles of Nuclear Emergency Core Hospitals, etc. and their Designation Requirements” and, at the 62nd FY 2024 NRA Commission Meeting (February 12, 2025), determined to designate the Japan Association of Radiological Technologists on February 12, 2025.

(2) Revision of Emergency Action Levels (EALs)

In light of the review of Emergency Action Levels (EAL) to assess whether nuclear operators fall under the classification of emergency situations, as reported in the 14th FY 2022 NRA Commission Meeting (June 1, 2022), the NRA held “Meetings on

Responses to the Review of Emergency Action Levels” concerning the special facilities for severe accident management, etc. on April 28, 2023 and discussed the draft of EAL revision with nuclear operators at the meeting. Thereafter, at the 25th FY 2023 NRA Commission Meeting (August 2, 2023), the NRA approved to solicit public comments on the Guideline for Nuclear Emergency Preparedness and Response concerning the review on EAL and proposal to revise relevant regulations, etc. At the 38th FY 2023 NRA Commission Meeting (October 18, 2023), the NRA approved the approach to the opinions submitted and decided the revision of the Guideline for Nuclear Emergency Preparedness and Response and relevant regulations, etc.

In FY 2024, the NRA re-organized new challenges that had been found in the course of discussions conducted so far and challenges left unsolved, such as cases with slow accident progression and what EAL is supposed to be, as matters subject to mid- and long-term discussion, and is continuously addressing the discussions on them.

(3) Study on operation of sheltering in place in the event of nuclear emergency.

Based on the opinion exchange meeting with local governments held in the Onagawa region on January 13, 2024, the NRA approved establishment of the study team on the operation of sheltering in place in the event of a nuclear emergency in which external experts also participated, local government officials, and Nuclear Disaster Management Bureau, Cabinet Office for the purpose of holding discussions for most effective operation of sheltering on March 27, 2024. The NRA held the discussion team meeting nine times, discussed the scope of sheltering, implementation period, matters to be considered in judgment of cancellation or switch to evacuation, and other issues.

In the course of the discussion, an interim summary on the status of discussion by the study team was conducted on October 18, 2024, and at the 40th FY 2024 NRA Commission Meeting (October 31, 2024), the NRA received a report on the status of the discussion made so far by the study team, including the contents of the interim summary, from the NRA Secretariat.

At the eighth meeting of the discussion team held on February 5, 2025, a report draft and Q&A concerning the operation of sheltering in place were presented. Then, at the ninth meeting held on March 28, 2025 that also took the result of requests for opinions to the relevant local governments, a report showing ideas on sheltering in place operation, including the scope of sheltering, timing to judge continuation, and matters to consider in deciding the cancellation and switch to evacuation was summarized. Afterwards, at the 1st FY 2025 NRA Commission Meeting (April 2, 2025), the NRA, having received a report, approved the revision of the Guideline for Nuclear Emergency Preparedness and Response. In response to remarks that it is important to strengthen

coordination with natural disaster response, the NRA determined, along with the department in charge of nuclear disaster prevention, to further strengthen the coordination with relevant ministries and agencies, including sharing of information on the proactive measures against natural disaster.

Section 4. Establishment and Operation of Crisis Management System

1. Strengthening Emergency Response Capabilities

(1) Emergency Response

Due to the earthquake centered west offshore of Ishikawa Prefecture that occurred at 22:47 on November 26, 2024, a seismic intensity of 5 lower was observed at Shika Town, Ishikawa Prefecture, a municipality with nuclear facility. The NRA, judging that this incident corresponds to an information collection level event, set up the information liaison office at 22:54 on the same day, immediately confirmed that there was no abnormality by collecting information on the equipment condition and radiation measurement value in the surrounding environment from the operator, and then shared the information with the relevant ministries and agencies. The NRA also dispatched information via its website and e-mail. At 0:28 on 27th of the same month, the NRA lifted the information collection level event and abolished the information liaison office.

In addition, the NRA strengthened its information collection and coordination system following natural disasters including an earthquake at Bungo Channel on April 17, 2024, a natural disaster caused by torrential rain from July 24 to 27, and earthquake in Hyuga Sea on August 8 following the announcement of Nankai Trough Earthquake Information. Regarding the missile launched by North Korea on May 27, the NRA also strengthened its information collection and coordination system, which allowed quick confirmation of the absence of abnormalities at nuclear facilities, and promptly shared the information with relevant government agencies and externally dispatched the information. In the response concerning the announcement of Nankai Trough Earthquake Information in particular, which was the first response since the start of operation of the crisis management system, the NRA alerted the operators concerning nuclear facilities located in specified municipalities in the countermeasure promotion areas against a Nankai trough earthquake as well as NRA Regional Offices in those locations.

(2) Establishment of Manuals for Crisis Management Response

Taking lessons from the FY 2023 Nuclear Energy Disaster Prevention Drills conducted in October 2023, the NRA partially revised the Nuclear Emergency Response Manual along with the Nuclear Disaster Management Bureau, Cabinet Office on July 2,

2024. The NRA also partially revised the above Nuclear Emergency Response Manual, and based on the lessons, etc. from the response to the 2024 Noto Earthquake, revised the Nuclear Emergency Initial Response Manual and Local Actions Standard Manual for Nuclear Emergency Situations (partial revision on December 23, 2024). In addition, based on the response concerning announcement of Nankai Trough Earthquake Information, the NRA re-organized the response procedures concerning the operation of warnings, etc. related to a massive earthquake and also revised the NRA Secretariat Initial Response Manual.

When field training concerning a radioisotope transportation accident was conducted in the NRA Secretariat in FY 2023, it was pointed out that coordination with the National Police Agency and other parties was necessary. Based on this finding, the NRA requested parties involved in land transportation of radioactive material including the National Police Agency, Ministry of Land, Infrastructure, Transport and Tourism, and Fire and Disaster Management Agency to participate in the training, and on March 27, 2025, a tabletop exercise was conducted.

(3) Functional Enhancement in Disaster Preparedness Training

The NRA continues to enhance the capabilities of staff involved in disaster preparedness and extraction and improvement of challenges in the disaster management system, through implementation and participation of various training.

In FY 2024, to enhance emergency response capabilities, the NRA conducted tabletop exercises for emergency response, focusing on decision-makers such as the NRA Chairman, Commissioners, and the Secretariat of the NRA (twice). In addition, NRA Commissioners participated in some emergency drills by nuclear operators.

Furthermore, in the Emergency Drills by Nuclear Operators, the NRA pursued smoother information sharing between the NRA Emergency Response Center (ERC) Plant Team and the operator's Nuclear Facility Emergency Response Center. In a training session in which other functional teams of the ERC Team also participated, the NRA confirmed the off-site response procedures based on the scenarios and the day's flow of the Emergency Drills by Nuclear Operators. To verify communication with local governments in the vicinity of nuclear facilities using landlines and satellite communication, emergency communication drills were conducted 17 times. Activity training of the emergency monitoring center for the swift establishment and smooth operation of it was conducted 13 times. Additionally, to establish effective information sharing with operators in the event of physical protection of nuclear material during an incident becoming necessary, drills related to physical protection of nuclear material were conducted 42 times.

Moreover, in the Nuclear Energy Disaster Prevention Drill held for the Sendai region from February 14 to 16, 2025, by giving information on the situation on temporary relocation of residents to the off-site functional group, the training was implemented for the purpose of smoothly proceeding with temporary relocation of residents including setting up of temporary relocation areas, preparation of request documents, and inspections at the time of evacuation and exit screening, etc. Additionally, for the actual corresponding group of the ERC team that is not directly engaged in these activities, by giving information on the situation concerning emergency transportation, the training aiming at improving the proficiency of these groups was implemented.

Furthermore, to enhance the effectiveness of service continuity plans in response to events like the Tokyo Inland Earthquakes, drills such as foot gathering exercises, communication exercises, Tokyo Inland Earthquakes response headquarters establishment exercises, and alternative off-site center activation exercises were conducted to confirm the equipment and functionality.

2. Strengthening Disaster Preparedness for Nuclear Operators

(1) Implementation and Continuous Improvement of Emergency Drills by Nuclear Operators

The NRA has been holding the Debriefing Session of Emergency Drills by Nuclear Operators and evaluating drills conducted by nuclear operators since FY 2013.

In the report meeting held on July 11, 2024, the evaluation results for Emergency Drills by Nuclear Operators in FY 2023 were presented by the Secretariat of the NRA.

Concerning commercial power reactor facilities, the NRA and nuclear operators have exchanged opinions on the desired status of training and the regulatory involvement for the purpose of training to improve the ability for emergency response since FY 2021. It was determined that further flexible and voluntary training is to be promoted, and that the policies to improve the effectiveness of training are to be reflected in the FY 2024 training implementation policy. At the 25th FY 2024 NRA meeting (August 21, 2024), the NRA received a report on this policy, and based on this policy, training was implemented in FY 2024 (see Tables 5-1 to 5-3). In the event of a large-scale disaster, it is assumed that the accidents occur simultaneously in multiple operators in areas where multiple nuclear sites are located. Therefore, in the Emergency Drills by Nuclear Operators in FY 2024, as with in FY 2023, the NRA conducted a training simulating simultaneous accidents in multiple operators in the same area due to a large-scale natural disaster (for operators that implemented training simulating simultaneous accidents in multiple operators in the same area, see Tables 5-1 to 5-3 and footnote). In the future, extraction of the challenges from the training result in FY 2024, relevant

improvement, etc. are planned to be conducted.

Table 5-1: Results of the Emergency Drills by Nuclear Operators in FY 2024 for Commercial Power Reactor

○Record of the Emergency Drills by Nuclear Operators in FY 2024 at Commercial Power Reactors

○Assessment Indices Assessment Indices for the Emergency Drills by Nuclear Operators in FY 2024 at Commercial Power Reactors

No.	Implementation Date	Place		Category	Index
1	September 17, 2024 ^{*1}	Kansai Electric Power Co., Inc.	Mihama NPS	Index 1	Information flow for information sharing
2	November 1, 2024 ^{*2}	Hokuriku Electric Power Co., Inc.	Shika NPS	Index 2	2-1 Status of accident and plant
3	November 12, 2024	Tokyo Electric Power Company Holdings, Inc.	Fukushima Daiichi/Fukushima Daini NPS		2-2 Information sharing with ERC plant team
4	November 15, 2024	Japan Atomic Power Company	Tsuruga NPS		2-3 Forecast of progress and strategies for dealing with accident
5	November 19, 2024	Tohoku Electric Power Co., Inc.	Higashidori NPS		2-4 Progress of strategy
6	November 22, 2024	Kansai Electric Power Co., Inc.	Ohj NPS	Index 3	3-1 Use of plant information display system
7	December 4, 2024	Kyushu Electric Power Co., Inc.	Genkai NPS		3-2 Use of tools for information sharing
8	December 13, 2024	Hokkaido Electric Power Co., Inc.	Tomari NPS		3-3 Liaison activities
9	January 21, 2025	Hokuriku Electric Power Co., Inc.	Shika NPS		3-4 Utilization of COP
10	January 24, 2025	Tohoku Electric Power Co., Inc.	Onagawa NPS	Index 4	Ensuring reliable reporting and communication
11	January 31, 2025	Shikoku Electric Power Co., Inc.	Ikata NPS	Index 5	Drill implementation plan based on issues in previous drills
12	February 4, 2025	Chubu Electric Power Co., Inc.	Hamaoka NPS	Index 6	Diversification and difficulty of scenarios
13	February 21, 2025	Kansai Electric Power Co., Inc.	Takahama PS	Index 7	7-1 Implementation of on-site field training
14	February 25, 2025 ^{*3}	Japan Atomic Power Company	Tokai Daini NPS		7-2 On-site response
15	February 28, 2025	Tokyo Electric Power Company Holdings, Inc.	Kashiwazaki Kariwa NPS		7-3 Appropriate response
16	March 4, 2025	Chugoku Electric Power Co., Inc.	Shimane NPS	Index 8	Public relation activities:
17	March 7, 2025	Kyushu Electric Power Co., Inc.	Sendai NPS	Index 9	9-1 Medium term plan concerning improvement of effectiveness of emergency response organizations
					9-2 Yearly plan concerning improvement of effectiveness of emergency response organizations
					9-3 Field training of emergency response organization
					9-4 Training setting with more realistic actions
					9-5 Implementation of support activity concerning effectiveness improvement
				Index 10	Observations of drills
				Index 11	Self-assessment and analysis of drill results
				Index 12	12-1 EAL judgment
					12-2 Human body/radiation safety
					12-3 Restoration strategy
					12-4 Appropriate response

*1: Training on assumption of simultaneous occurrence of accidents in Prototype Fast Breeder Reactor MONJU and Prototype Advanced Converter Reactor FUGEN in JAEA

*2: Training postponed from FY 2023 to FY 2024 due to 2024 Noto Peninsula Earthquake that occurred on January 1, 2024

*3: Drill on assumption of simultaneous occurrence of accidents in Tokai NPS of Japan Atomic Power Co. and Nuclear Science Research Institute of Japan Atomic Energy Agency

Table 5-2: Results of the Emergency Drills by Nuclear Operators in FY 2024 for Nuclear Fuel Cycle Facilities (Nuclear Science Research Institute, Nuclear Fuel Cycle Engineering Laboratories, Oarai Research and Development Institute, Prototype fast breeder reactor MONJU, and Reprocessing facility of Japan Nuclear Fuel Ltd.)

○Results of the Emergency Drills by Nuclear Operators in FY 2024 for Nuclear Fuel Cycle Facilities (Nuclear Science Research Institute, Nuclear Fuel Cycle Engineering Laboratories, Oarai Research and Development Institute, Prototype fast breeder reactor MONJU, and Reprocessing facility of Japan Nuclear Fuel Ltd.)

No.	Implementation Date	Place	
1	September 17, 2024* ¹	Japan Atomic Energy Agency	Prototype Fast Breeder Reactor MONJU
2	October 1, 2024* ²	Japan Nuclear Fuel Ltd.	Reprocessing Plant
3	December 3, 2024* ³	Japan Atomic Energy Agency	Oarai Research and Development Institute, Nuclear Fuel Cycle Engineering Laboratories
4	February 25, 2025* ⁴	Japan Atomic Energy Agency	Nuclear Science Research Institute

- *1: Drill on assumption of simultaneous occurrence of accidents in Prototype Advanced Converter Reactor FUGEN in JAEA and Mihama PS of Kansai Electric Power Co., Inc.
- *2: Drill on assumption of simultaneous occurrence of accidents in Enrichment Plant and Disposal Plant (Enrichment Business Division and Disposal Business Division) of Japan Nuclear Fuel Ltd. and Rokkasho Safeguards Center of Nuclear Material Control Center
- *3: Drill on assumption of simultaneous occurrence of accidents in Japan Atomic Energy Agency and Nippon Nuclear Fuel Development Co., Ltd.
- *4: Drill on assumption of simultaneous occurrence of accidents in Japan Atomic Energy Agency, Tokai NPS of Japan Atomic Power Co., and Tokai Daini PS of The Japan Atomic Power Co.

○Evaluation index of the Emergency Drills by Nuclear Operators in FY 2024 for Nuclear Fuel Cycle Facilities, etc. (Nuclear Science Research Institute, Nuclear Fuel Cycle Engineering Laboratories, Oarai Research and Development Institute, prototype fast breeder reactor MONJU, and reprocessing facility of Japan Nuclear Fuel Ltd.)

Category	No.	Index
Information sharing/notification	1	Information flow for information sharing
	2	Information sharing with ERC plant team (i) Status of accident and plant, (ii) forecast of progress and strategies for dealing with the accident, and (iii) progress of strategies
	3	Use of tools for information sharing: (i) Use of plant information display system (drills using ERSS, etc.), (ii) liaison activities, (iii) utilization of COP, and (iv) utilization of documents provided with ERC
	4	Ensuring reliable reporting and communication: (1) Accuracy of notification text, (2) explanation grounds for EAL judgement, (3) response of Article 10 confirmation meeting, and (4) report on Article 25
Efforts to improve emergency drills by nuclear operators	5	Formulation of drill implementation plan based on issues in previous drills
	6	Implementation status of drill without scenario presentation
	7	Diversification and difficulty of scenarios
	8	Public relation activities: (i) Press response linked with ERC public relations team, (ii) participation of players from outside the company such as reporters, (iii) holding mock press conference, and (iv) Dissemination of information to the outside using information dissemination tools
	9	Logistics support activities. (i) Support activities among nuclear operators, (ii) partnership with nuclear site emergency response support base, (iii) interaction with nuclear emergency situation support organization
	10	Site-visits and observations of drills: (i) Site-visits of other nuclear operators, (ii) acceptance for inspections to operators' drills, and (iii) acceptance of peer review
Results of Emergency Drills by Nuclear Operators	11	Self-assessment and analysis of drill results (i) Extraction of challenges from problems, (ii) cause analysis, (iii) countermeasures based on cause analysis result
	12	Rate of participation by emergency response personnel in drill (site and emergency response center)

Table 5-3: Results of the Emergency Drills by Nuclear Operators in FY 2024 for Nuclear Fuel Cycle Facilities (excluding Nuclear Science Research Institute, Nuclear Fuel Cycle Engineering Laboratories, Oarai Research and Development Institute, Prototype fast breeder reactor MONJU and Reprocessing facility of Japan Nuclear Fuel Ltd.)

○Results of the Emergency Drills by Nuclear Operators in FY 2024 for Nuclear Fuel Cycle Facilities (excluding Nuclear Science Research Institute, Nuclear Fuel Cycle Engineering Laboratories, Oarai Research and Development Institute, Prototype fast breeder reactor MONJU and Reprocessing facility of Japan Nuclear Fuel Ltd.)

○Evaluation index of the Emergency Drills by Nuclear Operators in FY 2024 for Nuclear Fuel Cycle Facilities (excluding Nuclear Science Research Institute, Nuclear Fuel Cycle Engineering Laboratories, Oarai Research and Development Institute, Prototype Fast Breeder Reactor MONJU, and reprocessing facility of Japan Nuclear Fuel Ltd.)

No.	Implementation Date	Place	Category	No.	Index
1	September 17, 2024 ^{*1}	Prototype Advanced Converter Reactor FUGEN, JAEA	Information sharing/notification	1	Information sharing between emergency response center and ERC plant team
2	October 1, 2024 ^{*2}	Enrichment plant and disposal plant (Enrichment Business Division and Disposal Business Division) of Japan Nuclear Fuel Ltd. Rokkasho Safeguards Center of Nuclear Material Control Center		2	Ensuring reliable reporting and communication: (i) Notification of incident corresponding to Article 10 and Article 15, (ii) accuracy of notification text, (iii) explanation of grounds for EAL judgment, (iv) report on Article 25
3	November 5, 2024 ^{*3}	Nuclear Engineering Laboratory of Toshiba Energy Systems & Solutions Corporation Global Nuclear Fuel Japan Co., Ltd.		3	Operation of communication device (operation of communication device that connects between emergency response center and ERC plant team)
4	November 26, 2024 ^{*3}	Institute for Integrated Radiation and Nuclear Science, Kyoto University Kindai University Atomic Energy Research Institute Kumatori Works of Nuclear Fuel Industries, Ltd.	Efforts to improve emergency drills by nuclear operators	4	Formulation of drill implementation plan based on issues in previous drills
5	December 3, 2024 ^{*4}	Nippon Nuclear Fuel Development Co., Ltd.		5	Implementation status of drill without scenario presentation
6	December 6, 2024 ^{*3}	Nuclear Professional School, Graduate School of Engineering, the University of Tokyo Tokai Safeguards Center of Nuclear Material Control Center		6	Diversification and difficulty of scenarios
7	December 10, 2024 ^{*3}	Mitsubishi Nuclear Fuel MHI Nuclear Development Corporation		7	Public relation activities: (i) Press response linked with ERC public relations team, (ii) participation of players from outside the company such as reporters (including public relations staff from other nuclear operator, etc.), (iii) holding mock press conference, and (iv) dissemination of information to the outside using information dissemination tools
8	December 17, 2024	Tokai Works of Nuclear Fuel Industries, Ltd.		8	Logistics support activities. (i) Support activities among nuclear operators, (ii) partnership with nuclear site emergency response support base
9	January 17, 2025	Recyclable-Fuel Storage Company		9	Site-visits and observations of drills: (i) Site-visits to other nuclear operators, (ii) acceptance of inspections to operators' drills, (iii) acceptance of peer review, (iv) observation of drills at ERC

10	January 28, 2025	Ningyo-toe Environmental Engineering Center, JAEA		10	Self-assessment and analysis of drill results (i) Extraction of challenges from problems, (ii) cause analysis, (iii) countermeasures based on cause analysis result
11	February 25, 2025 ^{*5}	Tokai PS of the Japan Atomic Power Co.	Results of Emergency Drills by Nuclear Operators	11	Rate of participation by emergency response personnel in drill (site)

- *1: Drill on assumption of simultaneous occurrence of accidents in Prototype Fast Breeder Reactor MONJU in JAEA and Mihama PS of Kansai Electric Power Co., Inc.
- *2: Drill on assumption of simultaneous occurrence of accidents in the site and the reprocessing plant of Japan Nuclear Fuel Ltd.
- *3: Drill on assumption of simultaneous occurrence of accidents
- *4: Drill on assumption of simultaneous occurrence of accidents in the Oarai Research and Development Institute of JAEA and the Nuclear Fuel Cycle Engineering Laboratories
- *5: Drill on assumption of simultaneous occurrence of accidents in Tokai Daini NPS of Japan Atomic Power Co. and Nuclear Science Research Institute of Japan Atomic Energy Agency

(2) Cooperation With Relevant Government Agencies on Nuclear Disaster Preparedness

Based on the provisions of the Basic Disaster Management Plan and to coordinate emergency responses and necessary support at nuclear sites, the NRA has been holding the Central Liaison Council for Nuclear Emergency Preparedness and Responses, which consists of relevant ministries and agencies, nuclear operators and the Atomic Energy Association (ATENA). In FY 2024, Central Liaison Council for Nuclear Emergency Preparedness and Responses was jointly held on September 26, 2024 to study the implementation status of training in collaboration with relevant organizations as well as the efforts of nuclear operators, etc. Additionally, in the regions where Nuclear Power Plants (NPPs) are located, the NRA holds Nuclear Disaster Preparedness Regional Liaison Meetings, involving regional branches of the constituent ministries of the Central Liaison Council, prefectural police headquarters responsible for the region (and, if necessary, those serving as evacuation destinations for wide-area evacuations), fire departments, regional Coast Guard headquarters (and, if necessary, the Coast Guard divisions covering the region), the Self- Defense Forces, and nuclear operators as members. In FY 2024, these meetings were held in six regions, contributing to the strengthening of collaboration among relevant agencies.

3. Improvement of Communication Network Infrastructure and System

The Integrated Nuclear Disaster Prevention Network System undergoes appropriate maintenance and management, including regular inspections and functional checks, etc. to ensure stable and reliable usage.

Concerning renewal to the next system, renewal work for the data center was completed in the first half, and renewal work for ERC, other administrative organizations, and some off-site centers was completed in the second half. The NRA is continuously proceeding with the work toward completion of the renewal work in October 2025.

Concerning the current Emergency Response Support System (ERSS) whose system update was conducted in FY 2019, proper system maintenance has been consistently carried out to ensure the constant provision of information from nuclear facilities. At the time of the renewal of the Integrated Nuclear Disaster Prevention Network System, the NRA planned renewal of the above system and completed the renewal work in March 2025.

The Radiation Monitoring Information Sharing and Publication System (RAMIS), designed for aggregating emergency monitoring results and facilitating rapid public sharing and disclosure among stakeholders, is maintained properly and disclose monitoring information even during normal times in order to facilitate smooth information dissemination to the public during an emergency. Concerning the update to the next RAMIS system scheduled from FY 2026, the NRA prepared the drafts of procurement specifications and requirement definition documents and started the procurement procedures.

In addition, to strengthen coordination regarding disaster information among relevant government ministries and agencies, the NRA improved the system related to coordination between the radiation monitoring information that is collected by RAMIS for response in the event of a nuclear accident and the information related to disaster prevention held by the Cabinet Office's Comprehensive Disaster Information System (SOBO-WEB) under the jurisdiction of the Cabinet Office based on the contents of the governmental liaison meeting related to disaster prevention digital platform held on February 6, 2023, and then started data coordination in March 2025.

In response to a remark made in the FY 2022 Administrative Project Review Public Process to the effect that concerning the information collection system regarding prefectural environmental radiation monitoring funded by the Radiation Surveillance Grant Program, "renewal of the system including cloud utilization should be uniformly conducted by the national government to reduce costs," the NRA conducted a study on drastic strengthening and efficient improvement including utilization of the cloud

toward the start of operation scheduled in FY 2026.

Section 5. Conducting Radiation Monitoring

1. Development and strengthening the Emergency Monitoring System

(1) Development of the Emergency Monitoring System in the Vicinity of Nuclear Facility Locations

The NRA Guide for Emergency Preparedness and Response stipulates that the level of emergency will be determined in accordance with the situation of the affected nuclear facility to implement preventive protective measures. Emergency response at an early stage or measures after the release of radioactive substances, for instance, evacuation or temporary relocation, will be decided and conducted appropriately based on the actual measurement values of the emergency monitoring. In line with this, the NRA is working to establish an effective emergency monitoring system, including the permanent presence of a senior radiation protection specialist to command emergency monitoring around nuclear facilities. Furthermore, the authority provides technical support to local governments responsible for maintaining and managing measurement equipment like monitoring posts, aiming to further enhance the measurement system. Concerning airborne monitoring using unmanned aircraft whose operation started in FY 2023, unmanned aircraft were actually flown in the Nuclear Energy Disaster Prevention Drills and other drills by three local governments.

(2) Operation of the Radiation Monitoring Information Sharing and Publication System

The purpose of RAMIS is to aggregate emergency monitoring results in the event of a nuclear disaster, share them among relevant parties, and promptly disclose them. To facilitate the smooth communication of information to the public during emergencies, monitoring information is regularly disclosed even during normal times.

(3) Promotion of development of advanced monitoring system

In order to implement new technologies in the radiation monitoring field and establish a more robust and agile radiation monitoring system, the NRA has developed the advanced radiation monitoring system initiative and proceeded with efforts toward the realization of agile monitoring for providing quick and detailed nuclear emergency response and robust monitoring with various means toward retention of functions in the event of complex disaster. The NRA also proceeded with efforts that contribute to labor saving, cost reduction, and digital transformation of monitoring.

Specifically, aiming at introducing LPWA (Low Power Wide Area) as a new

communication line to be used for communications with monitoring posts, etc. in addition to conventional mobile phone lines, wired lines, and satellite lines, the NRA proceeded with implementation of demonstration tests and the development of small-size monitoring devices that can be used in combination with LPWA. For mastering the operation of airborne monitoring using unmanned aircraft, unmanned aircraft were actually flown in the Nuclear Energy Disaster Prevention Drills and other drills by local governments, and development of a drone type monitoring post was advanced. Furthermore, concerning the information collection system related to the prefectural environment radiation monitoring system funded by the Radiation Surveillance Grant Program, the NRA conducted a study on cloud utilization whose operation was scheduled to be started in FY 2026 and proceeded with a study on a next-generation monitoring post that is inexpensive and easy to maintain compared to the current model.

(4) Strengthening Emergency Response Capabilities Through Training, etc.

To enhance the effectiveness of emergency monitoring in local public entities, basic courses on monitoring technology were conducted for local public entity employees and others a total of 25 times in FY 2024. Additionally, 13 training sessions for emergency monitoring center activities were carried out.

2. Measuring Radiation and Other Environmental Factors Nationwide

(1) Survey for Environmental Radioactivity Levels

In the 47 prefectures throughout Japan, the NRA collected environmental samples, such as atmospheric suspended dust, fallout and soil for radioactivity analysis. The results of measurement were put into a database in sequence and published on the NRA website. Furthermore, the airborne dose rate is continuously measured at 296 monitoring posts throughout Japan to open the measured data on the NRA website in real time.

(2) Comprehensive Assessment on Radioactivity in Oceanic Environment

To investigate radiation effects in the surrounding areas of nuclear power plants and nuclear fuel reprocessing facilities as well as nationwide environmental radioactivity levels, the NRA continued the radiation analysis of sea water in 16 ocean areas. The results from FY 2024 are planned to be entered into a database and disclosed on the NRA's website.

(3) Radiation Monitoring around Nuclear Power Plants

Financial support by the NRA was provided for the development of facilities

necessary for radiation monitoring and radioactivity measurement implemented by prefectures where nuclear facilities are located or neighboring prefectures (24 prefectures in total). In addition, the measured results reported by those local governments were put into a database sequentially to be published on the NRA website.

(4) Monitoring the Impact of Overseas Nuclear Incidents

The NRA has installed monitoring posts on Tsushima and Yonaguni Islands to assess the impact of radioactive substances on Japan in order to grasp the current air radiation dose rates in the event of nuclear incidents occurring abroad. In FY 2024, the measured values continue to be disclosed on the NRA website.

(5) Training Program for Local Government Officers Engaging in Radiation Monitoring

The NRA carried out “training for environmental radiation analysis” 16 times, targeting environmental radiation monitoring personnel in each prefecture.

3. The Strengthening of Environmental Radiation Measurement and Emergency Monitoring Capabilities in Ports Visited by Nuclear Warships

(1) Measurement of Radiation in the Environment at Ports where Nuclear Warships Are Anchored

The NRA periodically conducted radiological surveys in cooperation with related organizations such as the Japan Coast Guard at the three ports of Yokosuka, Sasebo and Kinnakagusuku, where the United States nuclear-powered warships make port calls, regardless of the presence or absence of such ships. Specifically, during the anchoring of nuclear warships, on-site radiation survey teams are formed to conduct radiation measurements and analyze seawater samples. The results of these measurements are confirmed to be consistent with pre-entry survey values. The radiation survey results during the entry and exit of nuclear warships and their port calls are published daily on the NRA’s website. Additionally, past survey results, including regular surveys, are stored in a database, and made publicly available.

(2) Strengthening the Emergency Monitoring System

Implemented the renewal of one monitoring station at Sasebo Port to address the aging of the facility where monitoring equipment is installed.

4. Consideration of Technical Matters Related to Monitoring

The NRA holds meetings of the “Technical Study Team on Environmental Radiation

Monitoring,” which is engaged in continuous studies on technical aspects of monitoring and were held the meeting twice in FY 2024.

On September 9, 2024 and January 28, 2025, the meeting of the study team was held, and the study team discussed the drafting of new measures concerning the measurement method series on “Quality Assurance and Uncertainty,” a revision plan that includes the addition of explanations of uncertainty evaluation of The Series of Environmental Radioactivity Measuring Method No. 2 “Radioactive strontium analysis method,” No. 25 “Radioactive carbon analysis method,” and No. 26 “Iodine 129 analysis method” and a revision plan of No. 6 “NaI(Tl) scintillation spectrometer analysis method.”

Concerning the details of monitoring during normal times that must be conducted by the local government at least in the area around the Kinki University's Nuclear Reactor, which is specified as “other nuclear facility” by the Guideline for Nuclear Emergency Preparedness and Response, the NRA also studied the scope of implementation and the main implementation items. Based on discussion in the Technical Study Team Meeting, the NRA specified the scope of implementation and the main implementation items of monitoring during normal times that the local public entities must conduct around the Kinki University Atomic Energy Research Institute at least as a relevant material of the supplementary reference for the Guideline for Nuclear Emergency Preparedness and Response.

References

References **TABLE OF CONTENTS**

Reference 1. Materials related to Ensuring Independence, Impartiality and Transparency, and Improving the Organizational Structure/ System (related to Chapter 1).....	147
1. Members of NRA	147
2. Establishment of the NRA and Organizational Change	148
3. Breakdown of Budget of NRA (after the second supplementary budget for FY 2024).....	148
4. Organization of the NR	150
5. NRA's Core Values and Principles	152
6. Code of Conduct on Nuclear Security Culture	153
7. Statement on Nuclear Safety Culture	154
8. Achievements to Hold the NRA Commission Meetings	155
9. Decisions by NRA Commission Meetings	166
10. Exchange of Opinions with Operators	169
11. Meetings and Opinion Exchange with Local Parties	172
12. Record of Opinion Exchange with Foreign Experts, etc.....	187
13. Continuous Improvement of Management	188
14. Status of Diversifying Workstyles	190
Reference 2. Relevant Materials related to Implementation of Various International Treaties on Nuclear Safety (related to Section 2 in Chapter 1).....	195
1. Implementation of Various International Treaties on Nuclear Safety... ..	195
2. Cooperation under International Organizations	197
3. Bilateral Cooperation	203
4. Overseas External Advisors	203
Reference 3. Materials related to Implementation of Regulations pertaining to the Reactor Regulation Act (related to Section 1 and 2 in Chapter 2).....	205
1. Status of Applications, Permissions or Approvals, and so on, related to Conformity of Commercial Power Reactors to New Regulatory Requirements	205
2. Review System of Conformity of Nuclear Power Stations to New Regulatory Requirements	211
3. Status of Inspection of Major Nuclear Facilities	212
4. Status of Application and Approval/Permission for Review of Nuclear Fuel Cycle Facilities, etc.	266

5. Numbers of Reviews and Checks of Nuclear Facilities	271
6. Status of Application and Approval of Operation Period Extension	273
7. Status of Application and Approval of Change in Operational Safety Program concerning Aging Management.....	274
8. Status of Application for Approval of Long-Term Facility Management Plan	275
9. Status of Approval of Decommissioning Plan	275
Reference 4. Materials related to Promotion of Safety Research and Continuous Improvement of Regulatory Requirements (related to Section 3 in Chapter 2) .	
1. FY 2024 Safety Research.....	278
2. Publication in Journals and List of Publication	279
Reference 5. Materials related to Promotion of Nuclear Security (related to Section 1 in Chapter 3).....	
1. Numbers of Approvals and Inspection of Regulations for the Security Plan	282
2. Overview of IPPAS Missions	282
Reference 6. Materials related to Oversight of Efforts toward the Decommissioning of Reactors at TEPCO's Fukushima Daiichi NPS (related to Section 1 in Chapter 4)	
1. Approval and Inspection of the Implementation Plan for Specified Nuclear Facilities (TEPCO Fukushima Daiichi NPS)	283
Reference 7. Materials related to Implementation and Continuous Improvement of Regulations relating to the Radioisotope Regulation Act (related to Section 2 in Chapter 5).....	
1. Status of Reviews and Inspections under the Radioisotope Regulation Act	284
Reference 8. Activities of Committees, Councils, Review Meetings, Study Teams, etc.	
1. Committees and Council *As of March 31, 2025	287
2. Review Meeting.....	303
3. Study Teams	307
4. Committees for Specific Research and Study	315
5. Others	323

Reference 1. Materials related to Ensuring Independence, Impartiality and Transparency, and Improving the Organizational Structure/ System (related to Chapter 1)

1. Members of NRA

	Chairman	Commissioner (Substitute for the Chairman)	Commissioner (Second substitute for the Chairman)	Commissioner (Third substitute for the Chairman)	Commissioner (Fourth substitute for the Chairman)
September 19, 2012 to September 18, 2014	TANAKA Shunichi	SHIMAZAKI Kunihiko	FUKETA Toyoshi	NAKAMURA Kayoko	OHSHIMA Kenzo
September 19, 2014 to September 18, 2015	TANAKA Shunichi	FUKETA Toyoshi	TANAKA Satoru	NAKAMURA Kayoko	ISHIWATARI Akira
September 19, 2015 to September 21, 2017	TANAKA Shunichi	FUKETA Toyoshi	TANAKA Satoru	ISHIWATARI Akira	BAN Nobuhiko
September 22, 2017 to September 25, 2022	FUKETA Toyoshi	TANAKA Satoru	YAMANAKA Shinsuke	BAN Nobuhiko	ISHIWATARI Akira
September 26, 2022 to September 18, 2024	YAMANAKA Shinsuke	TANAKA Satoru	SUGIYAMA Tomoyuki	BAN Nobuhiko	ISHIWATARI Akira
September 19, 2024 to ...	YAMANAKA Shinsuke	BAN Nobuhiko	SUGIYAMA Tomoyuki	NAGASAKI Shinya	YAMAOKA Koshun

2. Establishment of the NRA and Organizational Change

Date	Organizational Change
September 19, 2012	NRA was established.
March 1, 2014	Japan Nuclear Energy Safety Organization (JNES) was abolished and integrated.
October 14, 2014	Policy Director for Nuclear Emergency Preparedness was established in the Cabinet Office. *Officials belonging to the NRA were primarily appointed as concurrent officials of the Office for the Nuclear Emergency Preparedness, Cabinet Office. To reinforce the nuclear emergency response system, changing the appointment scheme, full-time officials were assigned to the Cabinet Office.
April 1, 2016	Director for Cybersecurity and Information Technology was established in the Secretary-General's Secretariat.
April 1, 2017	Deputy Secretary-General for Technical Affairs was established. Director for Laws and Regulations was established in the Secretary-General's Secretariat (renamed to Director for Litigation on April 1, 2020).
July 1, 2017	Radiation Protection Policy Planning Division, Director, Division of Regulation for Radiation and Director, Division of Nuclear Security were established in the Radiation Protection Department. Oversight Planning and Coordination Division was established in the Nuclear Regulation Department. *To respond to revisions in the inspection system and strengthening of regulations on radioisotopes, the organizational structure of the Radiation Protection Department and the Nuclear Regulation Department was reinforced.
April 1, 2018	Director for Evidence-based Policymaking was established in the Secretary-General's Secretariat.
April 1, 2019	Chief Record Officer (ex-officio position) was established in the Secretary-General's Secretariat.
April 1, 2024	Director, Division of Long Term Operation of Nuclear Power Plants was established in the Nuclear Regulation Department .

3. Breakdown of Budget of NRA (after the second supplementary budget for FY 2024)

	Budget Section	Budget for FY 2024 (after budget revision) (million yen)
General Account	General and administrative costs	4,755
	NRA facility costs	1,799
	Costs of ensuring nuclear safety	5,279
	Radioactivity investigation and research costs	1,487
	Costs of power-usage measures	1,126

Special Account for Energy Measures	Costs of nuclear safety regulatory measures	19,171
	Administrative handling costs	26,558
	Disbursements	0.3
	Reserve funds	30
Special Account for Reconstruction from the Great East Japan Earthquake	Costs of policies for environmental conservation and restoration	3,342
Total		63,547

4. Organization of the NRA

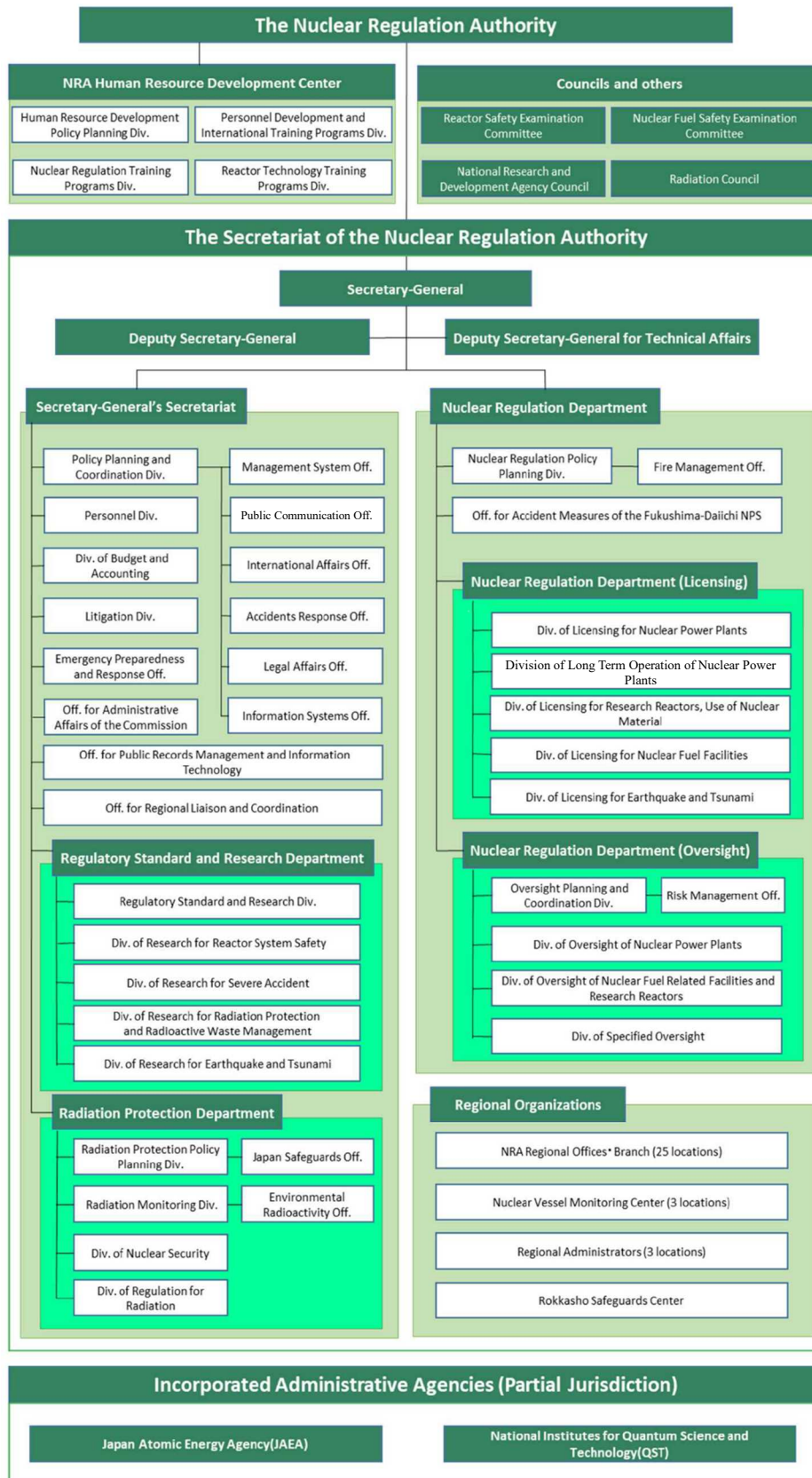


Figure i Organizational Structure of the NRA (April 2024 - March 2025)



Figure ii Location of NRA Regional Offices and Stationing of Regional Administrators

5. NRA's Core Values and Principles

(Determined on January 9, 2013 by the NRA)

Bearing in mind that:

- The NRA was established based on the lessons learned from the Fukushima Daiichi nuclear Power Station accident of March 11, 2011;
- Nuclear accidents should never be allowed to happen again;
- Restoring public trust, in Japan and abroad, in the nation's nuclear regulatory organization is of utmost importance and;
- The nuclear safety system and management must be rebuilt on a solid genuine safety culture, placing the highest priority on public safety;

Determined that:

- Everyone involved in nuclear field must have a high degree of responsibility and ethical values and seek to achieve the world's highest levels of safety;

We hereby solemnly pledge our full commitment and unwavering efforts to the foregoing.

Mission

Our fundamental mission is to protect the public and the environment through rigorous and reliable regulation of nuclear activities.

Guiding Principles for Activities

We in the NRA and its supporting Secretariat shall perform our duties diligently acting in accordance with the following principles.

(1) Independent Decision Making

We shall make decisions independently, based on the latest scientific and technological information, free from any outside pressure or bias.

(2) Effective Actions

We shall discard the previously ineffective approach to regulatory work and stress the importance of a field-oriented approach to achieve genuinely effective regulations.

(3) Open and Transparent Organization

We shall ensure transparency and appropriate information disclosure on regulations, including the decision-making process. We shall be open to all opinions and advice from Japan and the international community and avoid both self-isolation and self-righteousness.

(4) Improvement and Commitment

We shall be diligent in learning and absorbing the latest regulatory know-how and best practices, enhancing individual capacity, and performing our duties, mindful of the highest ethical standards, a sense of mission, and rightful pride.

(5) Emergency Response

We shall be ready to swiftly respond to all emergencies, while ensuring that in 'normal' times a fully effective response system is always in place.

6. Code of Conduct on Nuclear Security Culture

(Determined on January 14, 2015 by the NRA)

The Nuclear Regulation Authority (NRA) recognizes that it is the responsibility of everyone involved in nuclear activities to establish and maintain a positive nuclear security culture.

The NRA has therefore decided to establish a code of conduct to foster and continually enhance its own nuclear security culture.

On this basis, the NRA is committed to taking action to enhance nuclear security culture throughout Japan.

Code of Conduct

1. Recognizing Threat

The NRA and its Secretariat shall recognize that nuclear security threats exist at all times and constantly keep the importance of nuclear security in mind.

2. Interface with Safety

Nuclear security and safety do not exist independently and measures for security and safety are mutually dependent on each other and could negatively affect one another. We shall make all possible efforts for the harmonization of both measures and senior management shall be responsible for providing the most appropriate solution in cases of conflicts.

3. Responsibilities of Senior Management

Senior management shall demonstrate their commitment to nuclear security and shall make an assessment on how a positive nuclear security culture is developed within the NRA. In addition, senior management shall continuously work to foster a positive culture through setting up concrete goals and measuring achievements.

4. Capacity Building and Self-improvement

Nurturing competent staff is the responsibility of an organization, and the NRA shall provide capacity building programs on nuclear security. We shall have a 'questioning attitude' towards nuclear security issues at all times and strive to improve our effectiveness.

5. Confidentiality and Communication

While strictly observing confidentiality of nuclear security information, we shall proactively communicate with relevant stakeholders, as necessary, with a view to fostering a positive nuclear security culture in Japan.

7. Statement on Nuclear Safety Culture

(Determined on May 27, 2015 by the NRA)

Safety shall be given the overriding priority in the utilization of nuclear energy. Safety culture is recognized as continued practices with mindful awareness of this principle. It is the duty of everyone involved in nuclear energy to foster safety culture.

Recognizing its importance, the Nuclear Regulation Authority (NRA) has developed the code of conduct on safety culture taking due account of the lessons learned from the accident at the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company, Inc. The NRA will take the initiative in acting based on it.

Thereby, the NRA will strive to raise awareness of the importance of safety culture among everyone involved in nuclear energy and hence contribute to fostering safety culture in Japan.

Code of Conduct

1. Priority on Safety

In full recognition that absolute safety is not achievable, and the possibility of a serious accident remains, the overriding priority shall be placed on safety for “protecting people and the environment”.

2. Decision-making Taking into Account the Risks

Decisions shall be made in an independent and objective manner taking due account of the risks. Anyone who makes a decision is responsible for logically explaining the rationale of the decision while clarifying its own roles, responsibilities, and authority.

3. Fostering, Sustaining and Strengthening Safety Culture

Managers shall take the initiative in fostering the attitudes and actions that place the overriding priority on safety in their respective organizations. For sustaining and further strengthening safety culture, they shall also be vigilant to any early warning signs of decline in safety culture and shape and enhance the working environment so that the staff can maintain high morale.

4. Maintaining High Level of Expertise and Organizational Learning

Recognizing the importance of scientific and technical expertise for safety, each organization shall collect and analyze the latest information in Japan and overseas on regulatory activities, operating experience, and others to utilize the findings in its activities. Managers shall shape and enhance the working environment to promote such organizational learning.

5. Effective Communication

Open and frank discussion in the workplace shall be the basis in the pursuit of safety. Managers shall create such a working environment and promote active discussion in their respective organizations. Adequate communication shall be pursued both within the organization and with stakeholders for enhancing transparency and building trust by taking the initiative in information disclosure and exchange of a wide range of opinions.

6. Questioning Attitude

All the personnel shall always have one's own “questioning attitude” without complacency concerning any weaknesses that may affect safety, as well as whether there is any room for further improvement, and thereby identify safety issues.

7. Rigorous and Prudent Decisions and Agile Action

In response to any challenges to ensuring safety, all the staff shall make conservative decisions for safety taking into account even the worst-case scenario and quickly take necessary actions.

8. Harmonization with Nuclear Security

It is necessary to recognize that nuclear safety and security activities do not exist independently, they complement each other and interfere with each other. All the personnel involved in nuclear safety and security activities shall respect each other's way of thinking and make efforts for harmonizing both activities. Senior managers shall take responsibility to select the most appropriate solution.

8. Achievements to Hold the NRA Commission Meetings

(April 1, 2024, to March 31, 2025)

No.	Date	Deliberation Topic
1	Apr. 3	• Status of licensing review of conformity to the new regulatory requirements of nuclear power plants • Status of Review on licensing conformity to the new regulatory requirements of nuclear fuel cycle facilities and other centers • Report on results of the 18th Opinion Exchange Meeting with chief nuclear officers (CNOs) of major nuclear power facilities installers (regulated parties)
2	Apr. 10	• Report on results of the Opinion Exchange Meeting concerning clearance centralized treatment in Fukui Prefecture • Outline of the FY 2023 Annual Report of the NRA
3	Apr. 17	• Report on the status of the FY 2023 Radiation Council meetings • Report on review results of the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee (March 2024 Subcommittee) • Performance results and future policy regarding the preparation of easy-to-understand materials on nuclear regulations • Report on NRA Committee BAN's business trip
4 *1	Apr. 22	• Selection of Immediate Emergency Response members • Selection of review members for the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee
5	Apr. 24	• Approval of change in the operational safety program for power reactor facilities concerning technical assessment of aging management, etc. for Unit 2 of Shimane NPS, The Chugoku Electric Power Company. • Revision and establishment of relevant regulations concerning improvements in regulatory reports based on the Reactor Regulation Act in nuclear fuel facilities, etc. • Approach to confirmation of the application for confirming the waste disposal facility of Japan Nuclear Fuel Ltd. • Interim summary of the investigation and analysis of TEPCO's Fukushima Daiichi NPS accident (draft, 2024 edition) and solicitation of public comments • Report on NRA Committee TANAKA's business trip
6	May 8	• Summary of draft review results related to the application for permission for change of reactor installation for Onagawa NPS, Tohoku Electric Power Company. (change of power reactor facility for Unit 2) -Installation of permanent DC power supply (3rd system) in the station, etc.- • Report on errors in the questions of the FY 2023 Class II Radiation Protection Supervisor Examination conducted by the registered testing examination body • Summary of results of the 64th Technical Information Committee • Overview of IAEA's review on discharge of ALPS-treated water into the sea, the 2nd mission after the start of discharge into the sea • Report on NRA Committee YAMANAKA's business trip
7	May 15	• Summary of draft review results related to the application for permission for change of reactor installation for Takahama PS, The Kansai Electric Power Company. (change of power reactor facility for Units 1, 2, 3, and 4) - Replacement of steam generator, etc. at Units 3 and 4- • Proposed revision of the Regulation on the Use of International Controlled Material, etc. and solicitation of public comments • Results of implementation of safeguard activities in Japan in 2023

		- Results of nuclear regulatory inspections, etc. in the 4th quarter of FY2023 - Evaluation of regulatory reports based on the Reactor Regulation Act in FY 2023 (Response Policy C)
8 *2	May 15	Results of nuclear regulatory inspections, etc. in the 4th quarter of FY2023 (related to physical protection of nuclear material)
9	May 17	Discussion between the NRA and the executives of Kyushu Electric Power Company.
10	May 22	- Response to opinion inquiries regarding the “designation of base facilities for immediate emergency response, etc.” - Appointment of Immediate Emergency Response members - Results of on-site inspections for registered organizations that conduct inspections and other services based on the Radioisotope Regulation Act (FY 2023) - Evaluation of accidents and failures at sites handling radioisotopes, etc. in FY 2023 - Arbitrary decisions in the 4th quarter of FY 2023 (report)
11	May 29	- Annual Report of the NRA in FY 2023 - Approval of change in the operational safety program for power reactor facilities related to approval of extension of operational period and technical assessment of aging management for Units 3 and 4 of Takahama PS, The Kansai Electric Power Company. - Inspection results and comprehensive assessment for FY 2023 and inspection plans for FY 2024 - Status of review of the operational safety program for power reactor facilities of Shimane NPS, The Chugoku Electric Power Company. - Report on NRA Committee TANAKA’s business trip
12 *3	May 29	- Results of implementation of threat assessment concerning specified radioisotopes - Response policy based on consideration of identification of requirements for physical protection of nuclear material
13	Jun. 5	- Permission for change in reactor installation at Onagawa NPS, Tohoku Electric Power Company. (change of power reactor facility for Unit 2) -Installation of permanent DC power supply (3rd system) in the station, etc.- - Permission for change in reactor installation at Takahama PS, The Kansai Electric Power Company. (change of power reactor facility for Units 1, 2, 3, and 4) -Replacement of steam generator, etc. at Units 3 and 4- - Actions for reflection in the regulations of findings obtained from research/analysis on contamination of the reactor auxiliary cooling system - Revision of guidelines for operational improvement of nuclear regulatory inspections - Reinforcement of mutual cooperation at the interface of nuclear safety, nuclear security and safeguards (report of current status) - Submission of Japan’s 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the 1st time)
14	Jun. 12	- Results of nuclear regulatory inspections for Nippon Nuclear Fuel Development Co., Ltd. and future response policy - Summary of results of public meetings related to confirmation of the application for confirmation of the waste disposal facility of Japan Nuclear Fuel Ltd. - Status of efforts and response policy related to issues in nuclear regulatory

		inspections
15	Jun. 19	• Appointment of review commissioners of the Advisory Committee on Reactor Safety and the Advisory Committee on Nuclear Fuel Safety • Results of public comments on interim summary of the investigation and analysis of the TEPCO's Fukushima Daiichi NPS Accident (draft, 2024 edition) • Release of the “2023 Safeguard Statement by the International Atomic Energy Agency” (IAEA)
16 *4	Jun. 19	• Approval of appointment of executives at designated organizations implementing safeguard inspections
17	Jun. 26	• Approval of the Long-Term Facility Management Plan for Units 3 and 4 of Ohi NPS, The Kansai Electric Power Company. • Ex-post and interim assessments concerning safety research • Results of the FY 2024 selection for Business to Establish Technology Base for Strengthening of Study on Nuclear Regulation for enhancement of nuclear regulatory study • Business trip report by NRA Commissioner ISHIWATARI
18	Jul. 3	• Status of licensing review of conformity to the new regulatory requirements of nuclear power plants • Results of the FY 2024 selection for Business to Establish Technology Base for Strengthening of Study on Nuclear Regulation for enhancement of nuclear regulatory study (2nd time) • How to proceed with safety research in FY 2025 and beyond • Results of the selection in the NRA Human Resource Development Program in FY 2024 • Discussion of challenges for establishing the next medium-term targets
19	Jul. 10	• Revision of NRA Service Continuity Plans (Measures against Tokyo Inland Earthquakes) • Plan to implement technical reviews for industrial codes (FY 2024 and 2025) • Summary of results of the 65th Technical Information Committee • Summary of results of the 55th Meeting of Commission on Safety Standards (CSS) of the IAEA - Status of development of IAEA safety standards-
20	Jul. 17	• Consideration of safety assurance measures for fuel debris retrieval at the Nuclear Damage Compensation and Decommissioning Facilitation Corporation and Tokyo Electric Power Company Holdings, Inc. • Submission of Japan's 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the 2nd time) • Proposed revisions to the Guideline for Nuclear Emergency Preparedness and Response and relevant ordinances (establishment of a new framework for the national government to designate a medical cooperation institution for nuclear emergency) and solicitation of public comments • Proposed revision of relevant regulations and guidelines concerning type certification and type designation, and solicitation of public comments • Results of studies and deliberations by the Advisory committee on Reactor Safety and the Advisory Committee on Nuclear Fuel Safety regarding the system for the evaluation of safety improvement • Report on NRA Committee BAN's business trip
21	Jul. 24	• Discussion with the Chairmen of the RSEC and NFSEC • Summary of draft review results related to the application for permission for change of reactor installation for the Nuclear Science Research Institute of the

		JAEA [change of FCA (Fast Critical Assembly) facility] -Change in method of for disposal of spent fuel- • Results of public comments on the proposed revision of the Regulation on the Use of International Controlled Material and determination of the proposed revision • Establishment of a study team concerning the technical evaluation of the Japan Electric Association Standards concerning surveillance test practice for the reactor vessel structure material and fracture toughness confirmation test practice • Summary of report on the 2nd Mission of IAEA Review after starting discharge into the sea on discharging ALPS-Treated Water into the sea
22	Jul. 31	• Comments by external experts on the NRA's administrative review of FY 2024 • Review results of the review meeting for the application for permission for change of reactor installation for Tsuruga NPS, The Japan Atomic Power Co. (change of power reactor facility for Unit 2) and future response • Results of consideration of issues concerning involvement of nuclear operators in emergency response training and regulations, and future policy
23 *5	Jul. 31	• Results of consideration of issues concerning involvement of nuclear operators in emergency response training and regulations, and future policy (related to physical protection of nuclear material) • Summary of results of the 25th Nuclear Security Guidance Committee (NSGC) of the International Atomic Energy Agency (IAEA) -status of revision of superior documents of IAEA nuclear security series- • Status of response to the International Physical Protection Advisory Service (IPPAS) missions of the International Atomic Energy Agency (IAEA)
24	Aug. 2	• Discussion between the NRA and executives of Japan Atomic Power Co.
25	Aug. 21	• Ex-post evaluation concerning FY 2023 implementation policies and future policy evaluation • Evaluation concerning the operational performance of the National Institutes for Quantum Science and Technology in FY 2023 (co-jurisdictional part of the NRA) • Evaluation, etc., concerning the operational performance of the JAEA (co-jurisdiction of part of the NRA) in FY 2023 • Status of review of the application for approval of change in the operational safety program concerning the organizational reform of the Nuclear Science Research Institute of the JAEA and the procedure for approval of changes to the medium-to-long-term plan • Results of nuclear regulatory inspections, etc. in the 1st quarter of FY 2024 • Results of emergency drills by nuclear operators in FY 2023 and report on implementation policies for drills of FY 2024
26 *6	Aug. 21	• Selection of review members for the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee • Results of nuclear regulatory inspections, etc. in the 1st quarter of FY2024 (related to physical protection of nuclear material)
27	Aug. 28	• Summary of draft review results related to the application for permission for change of reactor installation for Tsuruga NPS, The Japan Atomic Power Co. (change of power reactor facility for Unit 2) • Report on review results of the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee (Subcommittee on Earthquake and Tsunami Hazards) • Summary of results of the 66th Technical Information Committee

		Report from Country-Specific Safety Culture Forum (CSSCF) in Japan
28 *7	Aug. 28	- Selection of candidates for expert commissioners of Radiation Council - Report on results of the International Physical Protection Advisory Service (IPPAS) missions of the International Atomic Energy Agency (IAEA)
29	Sept. 4	- Summary of draft review results related to the application for permission for change in research reactor installation of experimental fast reactor facility at the Oarai Research and Development Institute (south area) of the JAEA –Addition of experimental device for RI production, etc.– - Summary of draft review results related to the application for permission to change facility operations for processing nuclear fuel materials at Mitsubishi Nuclear Fuel Co., Ltd. –Addition of descriptions concerning work process for carrying out cleaning residue, etc.– - Budget request for FY 2025 and request for the organization and capacity of the NRA - Arbitrary decisions in the 1st quarter of FY 2024 (report)
30 *8	Sept. 4	Draft review reports related to matters with regard to installation of special facilities for severe accident management in the application for permission for change in the basic design of the power reactor at the Shimane NPS Unit 2 of Chugoku Electric Power Company.
31	Sept. 11	- Summary of draft review results related to the application for permission for change of reactor installation for Shimane NPS, The Chugoku Electric Power Company. (change of power reactor facility for Unit 2) -Installation of special facilities for severe accident management and permanent DC power supply (3rd system) in the station- - Results of public comments on the proposed revision of the Guideline for Nuclear Emergency Preparedness and Response (new establishment of a framework for the national government to designate a medical cooperation institution for nuclear emergency) and determination of the proposed revision - Appointment of review commissioners of the Advisory Committee on Reactor Safety and the Advisory Committee on Nuclear Fuel Safety
32	Sept. 18	- Results of affirmation of the Probabilistic Risk Assessment (PRA) model of Kashiwazaki- Kariwa NPS Unit 7 used for nuclear regulatory inspections - Report on results of the 19th Opinion Exchange Meeting with chief nuclear officers (CNOs) of major nuclear power facilities installers (regulated parties) - Report on NRA Committee YAMANAKA's business trip
33	Sept. 19	Designation of commissioners to act as deputies to the NRA Chairman
34	Sept. 25	- Results of public comments on the proposed revision of relevant regulations and guidelines concerning type certification and type designation, and determination of the proposed revision - Establishment of the Subcommittee on Cosmic Radiation Protection for Aircraft Crew. in the Radiation Council and appointment of expert commissioners
35	Oct. 2	- Status of licensing review of conformity to the new regulatory requirements of nuclear power plants - Status of Review on licensing conformity to the new regulatory requirements of nuclear fuel cycle facilities and other centers
36	Oct. 9	- Establishment of a working-level technical information exchange meeting with operators related to the design of rebuilt reactors - Summary of results of the 67th Technical Information Committee
37 *9	Oct. 9	Status of checks on key items, etc. based on supplemental inspections of the

		Kashiwazaki-Kariwa NPS, Tokyo Electric Power Company Holdings, Inc.
38	Oct. 16	• Approval of change in the operational safety program for power reactor facilities concerning technical assessment of aging management, etc. for Takahama PS Unit 1, The Kansai Electric Power Company. • Approval of change in the operational safety program for power reactor facilities concerning technical assessment of aging management, etc. for Ikata NPS Unit 3, Shikoku Electric Power Company. • Handling of shared equipment in special inspections of power reactor facilities • Policy for review of the system for the evaluation of safety improvement • Status of efforts on emergency monitoring • Review of the operation of educational training courses for acquisition of qualifications for inspectors, etc. • Report on errors in questions of the FY 2024 Radiation Protection Supervisor Examination conducted by the registered testing body
39	Oct. 23	• Permission for change in reactor installation for Shimane NPS, The Chugoku Electric Power Company. (change of power reactor facility for Unit 2) - Installation of special facilities for severe accident management and permanent DC power supply (3rd system) in the station- • Response policy on partial revision of the operational guide for periodic evaluation of waste storage facility • Summary of results of the 68th Technical Information Committee
40	Oct. 31	• Summary of draft review results related to the application for permission for change of reactor installation for Sendai NPS, Kyushu Electric Power Company. (change of power reactor facility for Units 1 and 2) –Sharing of spent fuel storage facility, etc. and replacement of motor-driven auxiliary feedwater pump– • Confirmation of facility classification and safety functions for cask pits and inter-reactor transport containers at power reactor facilities • Status of study in "Study Team on Operation of Sheltering in Place in the Event of Nuclear Emergency" • Consideration for establishing the next medium-term targets (clarification of basic matters) • Report on NRA Committee BAN's business trip
41	Nov. 6	• Summary of draft review results related to the application for permission for change of reactor installation for Mihama NPS, The Kansai Electric Power Company. (change of power reactor facility for Unit 3) –Change of storage location for reduced-volume burnable poison– • Pre-service inspection for the spent fuel storage facility at the Recycled Fuel Stockpile Center of the Recyclable-Fuel Storage Company • Response to the Prototype Fast Breeder Reactor MONJU based on the release of active fault maps by the Geospatial Information Authority of Japan
42	Nov. 13	• Disposition of the application for permission for change of reactor installation for Tsuruga NPS, The Japan Atomic Power Co. (change of power reactor facility for Unit 2) • Proposed revision of the Order for Enforcement of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors and other acts, and solicitation of public comments for the full-scale enforcement of the law to partially revise the Electricity Business Act and other acts for establishing electricity supplying systems for realizing a decarbonized society • Consideration for improving reviews and inspections concerning TEPCO's Fukushima Daiichi Nuclear Power Station (the 1st time)

		Review of the approach to conformity evaluation concerning the new regulatory requirements
43	Nov. 13	Discussion between the NRA and the executives of Chubu Electric Power Company.
44	Nov. 20	- Change of the NRA Annual Operational Plan for FY 2024 - Involvement of the NRA in the award system for radiation safety management and environmental radiation monitoring sponsored by private organizations - Summary of results of the 56th Meeting of Commission on Safety Standards (CSS) of the IAEA -Status of development of IAEA safety standards- - Overview of results of Information Exchange Meeting with International Advisors and the NRA Committee - Arbitrary decisions in the 2nd quarter of FY 2024 (report)
45	Nov. 27	- Consideration for establishing the next medium-term targets (outline discussion) - Results of nuclear regulatory inspections, etc. in the 2nd quarter of FY 2024 - Report on NRA Committee SUGIYAMA's business trip
46 *10	Nov. 27	Results of nuclear regulatory inspections, etc. in the 2nd quarter of FY2024 (related to physical protection of nuclear material)
47	Dec. 4	- The NRA's comments on "FY 2024 Plans for Nuclear Energy Disaster Prevention Drill" - Permission for change of reactor installation for Sendai NPS, Kyushu Electric Power Company. (change of power reactor facility for Units 1 and 2) –Sharing of spent fuel storage facilities and replacement of motor-driven auxiliary feedwater pumps– - Approach to consideration of safety assurance measures for fuel debris retrieval at Fukushima Daiichi NPS, Tokyo Electric Power Company Holdings, Inc. - Revision of the implementation guidelines for evaluation of safety research projects - Overview of NRA's supplementary budget of FY 2024
48	Dec. 4	Discussion between the NRA and the executives of Shikoku Electric Power Company.
49	Dec. 11	- Permission for change of reactor installation for Mihama NPS, The Kansai Electric Power Company.(change of power reactor facility for Unit 3) –Change of storage location for reduced-volume burnable poison– - Approach to future reviews for improvement of regulatory reports - Report on the holding of the International Nuclear Regulatory Oversight Workshop (INROW)
50	Dec. 18	- Consideration for establishing next medium-term targets (considering the outline) (the 2nd) - Sea area monitoring conducted under the framework of the IAEA (report) - Overview of IAEA's review on discharge of ALPS-treated water into the sea, the 3rd mission after the start of discharge into the sea
51	Dec. 25	- Preliminary evaluations concerning safety research - Summary of results of the 69th Technical Information Committee
52	Jan. 8	- Status of licensing review of conformity to the new regulatory requirements of nuclear power plants - Actions toward acceptance of the integrated regulatory review service (IRRS) missions of the International Atomic Energy Agency (IAEA) - Outline of the NRA's proposed budget for FY 2025
53	Jan. 15	Progress of activities concerning risk reduction at TEPCO's Fukushima Daiichi

		Nuclear Power Station and handling of the risk map • Implementation policy for FY 2025 concerning Business to Establish Technology Base for Strengthening of Study on Nuclear Regulations for enhancement of nuclear regulatory study • Report on review results of the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee (Subcommittee on Earthquake and Tsunami Hazards and Subcommittee on Volcanic Hazards) • Status of efforts for diversifying workstyles at the Secretariat of the NRA
54 *11	Jan. 21	• Answers to questions regarding Japan's 8th National Report to the Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (draft) (the 1st time)
55	Jan. 22	• Revision of the Order for Enforcement of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, etc. for the full -scale enforcement of the law to partially revise the Electricity Business Act and Other Acts for Establishing Electricity Supplying Systems for Realizing a Decarbonized Society • Proposed revision of relevant regulations and guidelines concerning the system for evaluation of safety improvement and solicitation of public comments • Consideration for establishment of next medium-term targets (discussion of proposed targets)
56 *12	Jan. 22	• Selection of candidates for expert commissioners of Radiation Council • Summary of results of the 26th Nuclear Security Guidance Committee (NSGC) of the International Atomic Energy Agency (IAEA) -status of revision of superior documents of IAEA nuclear security series- • Status of study based on advice from the International Physical Protection Advisory Service (IPPAS) missions of the International Atomic Energy Agency (IAEA) (related to RI security)
57	Jan. 29	• Revision of the Measures for Mid-term Risk Reduction at TEPCO's Fukushima Daiichi Nuclear Power Station • Establishment of a forum for discussion on utilization of risk information and implementation of on-site demonstration of on-line maintenance • Future response policy on clearance centralized treatment business in Fukui Prefecture
58 *13	Jan. 29	• Status of study based on recommendations and advice from the International Physical Protection Advisory Service (IPPAS) missions of the International Atomic Energy Agency (IAEA) (related to physical protection of nuclear material)
59 *14	Feb. 4	• Proposed revision of the interpretation of the Ordinance for Enforcement of the Act on the Regulation of Radioisotopes, etc. concerning protection measures for specified radioisotopes and solicitation of public comments from operators
60	Feb. 5	• Consideration for establishment of next medium-term targets (summary of targets) • Policy for review concerning installation of the spent fuel dry storage facility at Onagawa NPS of Tohoku Electric Power Company. and Takahama PS of The Kansai Electric Power Company. • Environmental radiation monitoring concerning overseas nuclear-related events
61 *15	Feb. 5	• Answers to questions regarding Japan's 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the 2nd time)
62	Feb. 12	• New designation of medical cooperation institutions for nuclear emergency designated by the national government

		• FY 2025 Implementation Plan of the NRA Human Resource Development Program • Status of implementation of exchange of technological views with the nuclear operators on safety research and research and development • Status of response toward digitalization of administrative procedures under the jurisdiction of the Nuclear Regulation Authority
63	Feb. 19	• Consideration for improving reviews and inspections concerning TEPCO's Fukushima Daiichi Nuclear Power Station (the 2nd time) • Implementation of working-level exchange of opinions on the scope of application of the Reactor Regulation Act for JAEA's HTTR hydrogen production facility • Results of nuclear regulatory inspections, etc. in the 3rd quarter of FY 2024
64 *16	Feb. 19	• Approval of appointment of executives at designated organizations implementing safeguard inspections • Future response for enforcement of the Act on the Protection and Utilization of Critical Economic Security Information • Results of nuclear regulatory inspections etc. in the 3rd quarter of FY2024 (related to physical protection of nuclear material)
65	Feb. 26	• Publication of the NRA's initiatives (March 11 report) • FY 2024 Management Review • Status of study and future response policy regarding the "Basic Concept for Safety Assurance Toward Realization of Fusion Energy" in the Cabinet Office • Incorrect collection of fees concerning nuclear regulatory inspections and future response • Summary of results of the 70th Technical Information Committee
66	Mar. 5	• Approval of the Long-Term Facility Management Plan for Unit 3 of Genkai NPS, Kyushu Electric Power Company. • Revision of matters for deliberations at the RSEC and the NFSEC • Publication of the NRA's initiatives (March 11 report) (the 2nd) • FY 2024 Management Review (the 2nd)
67 *17	Mar. 6	• Selection of Immediate Emergency Response members • Additional answer to questions regarding Japan's 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management
68	Mar. 12	• Revision of the implementation guidelines for implementation plan inspections of reactor facilities at Fukushima Daiichi NPS, Tokyo Electric Power Company Holdings, Inc. • Basic policy of FY 2025 implementation plan inspections at Fukushima Daiichi Nuclear Power Station, Tokyo Electric Power Company Holdings, Inc. • Results of on-site inspections for designated information processing organizations and designated organizations implementing safeguards inspections • Revision of ordinances for organization of the NRA
69	Mar. 19	• Clarification of the scope of application of the Reactor Regulation Act for JAEA's HTTR heat utilization test facility and future approach • Status of implementation of training on fire protection for nuclear facilities • Revision of NRA Service Continuity Plans (Measures against novel influenza, etc.) • Arbitrary decisions in the 3rd quarter of FY 2024 (report) • Report on NRA Committee SUGIYAMA's business trip

70 *18	Mar. 24	• Draft review reports related to the matters with regard to special facilities for severe accident management in application for permission for change of reactor installation for Takahama PS, The Kansai Electric Power Company. (change of power reactor facility for Units 1, 2, 3, and 4) • Selection of review member candidates for the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee • Selection of Radiation Council member candidates • Selection of member candidates for the National Research and Development Agency Council
71	Mar. 26	• Summary of draft review results related to the application for permission for change of reactor installation for Takahama PS, The Kansai Electric Power Company. (change of power reactor facility for Units 1, 2,3, and 4) -Installation of the spent fuel dry storage facility- • Summary of draft review results related to the application for permission for change of reactor installation for Onagawa NPS, Tohoku Electric Power Company. (change of power reactor facility for Unit 2) -Installation of the spent fuel dry storage facility- • NRA Annual Operational Plan for FY 2025 • Status of reflection of basic policy assessment plan, FY 2025 policy assessment implementation plan and policy assessment results (published in FY 2024) in the policy • Business trip report by NRA Commissioner NAGASAKI

- *1: The 4th FY 2024 NRA Commission Meeting was closed to the public because the agenda of the Meeting covered selection of candidates for Council members and partially handled personal information and information related to human resources management.
- *2: The 8th FY 2024 NRA Commission Meeting was closed to the public because the agenda item included information on the physical protection of nuclear materials which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities.
- *3: The 12th FY 2024 NRA Commission Meeting was closed to the public (1) because the first of the agenda items handled information on the security of specified radioisotopes, and there was a risk of harm to public safety if such information and deliberations became known by those who plan to steal specified radioisotopes, and (2) because the second of the agenda items included information on the physical protection of nuclear materials which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities.
- *4: The 16th FY 2024 NRA Commission Meeting was closed to the public because the Meeting handled the selection of personnel at the designated organization, and there was a risk of harm to the rights and interests of individuals and an obstacle to ensuring fair and smooth personnel affairs related to personnel management at the organization if this information and discussion were to become public,
- *5: The 23rd FY 2024 NRA Commission Meeting was closed to the public because the agenda item included information on the physical protection of nuclear materials and specified radioisotopes which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities or those who plan to steal specified radioisotopes.
- *6: The 26th FY 2024 NRA Commission Meeting was closed to the public (1) because the first of the agenda items covered selection of candidates for the members of the Councils and partially handled personal information and information related to human resources management which might harm the rights and interests of individuals and become an obstacle to ensuring fair and smooth personnel management if such information and deliberations become public, and (2) because the second agenda item included information on the physical protection of nuclear materials which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities.
- *7: The 28th FY 2024 NRA Commission Meeting was closed to the public (1) because the first of the agenda items covered selection of candidates for the expert commissioners of the Council and others and partially handled personal information and information related to human resources management which might harm the rights and interests of individuals and become an obstacle to ensuring fair and smooth personnel management if such information and deliberations become public, and (2) because the second agenda item included information on the physical protection of nuclear materials and specified radioisotopes which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities or those who plan to steal specified radioisotopes.
- *8: The 30th FY 2024 NRA Commission Meeting was closed to the public because the agenda item included information on installation of special facilities for severe accident management which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities.

- *9: The 37th FY 2024 NRA Commission Meeting was closed to the public because the agenda item included information on the physical protection of nuclear materials which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities.
- *10: The 46th FY 2024 NRA Commission Meeting was closed to the public because the agenda item included information on the physical protection of nuclear materials which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities.
- *11: The 54th FY 2024 Commission Meeting was closed to the public because the agenda item included information on answers to questions regarding Japan's 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management which might hinder the maintenance of trust with other countries if such information and deliberations became public.
- *12: The 56th FY 2024 NRA Commission Meeting was closed to the public (1) because the first of the agenda items covered selection of candidates for the expert commissioner of the Council and others and partially handled personal information and information related to human resources management which might harm the rights and interests of individuals and become an obstacle to ensuring fair and smooth personnel management if such information and deliberations become public, (2) because the second agenda item included information on the physical protection of nuclear materials and specified radioisotopes which might endanger public safety if such information and deliberations became public and known by those who plan to sabotage nuclear facilities or those who plan to steal specified radioisotopes, and (3) because the third agenda item included information on specified radioisotopes which might endanger public safety if such information and deliberations became public and known by those who plan to steal specified radioisotopes.
- *13: The 58th FY 2024 NRA Commission Meeting was closed to the public because the agenda item included information on the physical protection of nuclear materials which might endanger public safety if such information and deliberations became known by those who plan to sabotage nuclear facilities.
- *14: The 59th FY 2024 NRA Commission Meeting was closed to the public because the agenda item included information on the physical protection of specified radioisotopes which might endanger public safety if such information and deliberations become public and known by those who plan to steal specified radioisotopes.
- *15: The 61st FY 2024 Commission Meeting was closed to the public because the agenda item included information on answers to questions regarding Japan's 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management which might hinder the maintenance of trust with other countries if such information and deliberations became public.
- *16: The 64th FY 2024 NRA Commission Meeting was closed to the public (1) because the first of the agenda items covered selection of executives for the designated organization and partially handled personal information and information related to human resources management which might harm the rights and interests of individuals and become an obstacle to ensuring fair and smooth personnel management if such information and deliberations become public, (2) because the second agenda item included information on critical economic infrastructures and handled especially confidential information to ensure Japan's national security (critical economic security information) which might endanger public safety if such information and deliberations became public and known by those who plan to commit acts endangering the security of the nation and its citizens in connection with economic activities, and (3) because the third agenda item handled information on the physical protection of nuclear materials which might endanger public safety if such information and deliberations became public and known by those who plan to sabotage nuclear facilities.
- *17: The 67th FY 2024 NRA Commission Meeting was closed to the public (1) because the first of the agenda items covered selection of candidates for the members and partially handled personal information and information related to human resources management which might harm the rights and interests of individuals and become an obstacle to ensuring fair and smooth personnel management if such information and deliberations become public and (2) because the second agenda item handled information on answers to questions regarding Japan's 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management which might hinder the maintenance of trust with other countries if such information and deliberations became public.
- *18: The 70th FY 2024 NRA Commission Meeting was closed to the public because the agenda items handled information on installation of special facilities for severe accident management which might endanger public safety if such information and deliberations became public and known by those who plan to sabotage nuclear facilities and the second to fourth agenda items covered selection of the Committees and candidates for the members of the Committees and partially handled personal information and information related to human resources management which might harm the rights and interests of individuals and become an obstacle to ensuring fair and smooth personnel management if such information and deliberations become public.

9. Decisions by NRA Commission Meetings

(April 1, 2024, to March 31, 2025)

Date of determination	Decision made in the Meetings
Apr. 24	- Approval of change in the operational safety program for power reactor facilities of Shimane NPS, The Chugoku Electric Power Company. (addition of long-term facility management policy for Unit 2) - Results of public comments on the Rules on Use of Nuclear Fuel Materials, etc. and revision of relevant regulations, etc.
May 8	Application for permission for change of reactor installation for Onagawa NPS (change of power reactor facility for Unit 2) (installation of permanent DC power supply (3rd system), etc. in the station) (hearing of opinions)
May 15	Application for permission for change of reactor installation for Takahama PS (change of power reactor facility for Units 1, 2, 3, and 4) (replacement of steam generator, etc. at Units 3 and 4) (hearing of opinions)
May 22	- Opinion inquiries concerning the designation of core facilities for Immediate Emergency Response measures (answer) - Appointment of Immediate Emergency Response members (as of July 1, 2024)
May 29	- Decision and release of Annual Report of the NRA in FY 2023 - Approval of the application for approval of extension of the operational period for Takahama PS, The Kansai Electric Power Company. (extension of operational period of Unit 3 power reactor facility) - Approval of the application for approval of extension of the operational period for Takahama PS, The Kansai Electric Power Company. (extension of operational period of Unit 4 power reactor facility) - Approval of change in the operational safety program for power reactor facilities of Takahama PS, The Kansai Electric Power Company. (addition of long-term facility management policy for Units 3 and 4)
Jun. 5	- Application for permission for change of reactor installation for Onagawa NPS (change of power reactor facility for Unit 2) (permission) (installation of permanent DC power supply (3rd system), etc. in the station) - Application for permission for change of reactor installation for Takahama PS (change of power reactor facility for Units 1, 2, 3, and 4) (permission) (replacement of steam generator, etc. for Units 3 and 4)
Jun. 19	- Appointment of review commissioners of the Advisory Committee on Reactor Safety and the Advisory Committee on Nuclear Fuel Safety - Approval of appointment of executives at designated organizations implementing safeguard inspections
Jun. 26	- Approval of the Long-Term Facility Management Plan for Unit 3 of Ohi NPS, The Kansai Electric Power Company. - Approval of the Long-Term Facility Management Plan for Unit 4 of Ohi NPS, The Kansai Electric Power Company.
Jul. 10	Revision of NRA Business Continuity Plans (Measures for Tokyo Inland Earthquakes)
Jul. 17	Submission of Japan's 8th National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the 2nd time)
Jul. 24	Application for permission for change in reactor installation for the Nuclear Science Research Institute of the JAEA [change of FCA (Fast Critical Assembly) facility] (hearing of opinions)

	Notification of results of public comments on rules for complete revision of the Regulations on the Use of International Controlled Material (draft), etc. and revision thereof
Aug. 21	- Determination of policy assessment summaries and policy assessment reports for policies implemented in FY 2023, and ex-post assessment reports for policies aiming at establishing, revising, or abolishing regulations - Evaluation concerning the operational performance of the National Institutes for Quantum Science and Technology in FY 2023 (co-jurisdictional part of the NRA) - Evaluation, etc. concerning the operational performance of the JAEA (co-jurisdiction part of the NRA) in FY 2023 - Changes to the plan (medium-to-long-term plan) for achieving the medium-to-long-term goals of the Nuclear Science Research Institute of the JAEA (discussion)
Aug. 28	Application for permission for change of reactor installation for Tsuruga NPS (change of power reactor facility for Unit 2)
Sept. 4	- Application for permission for change of reactor installation for the Oarai Research and Development Institute (south area) of the JAEA (change of experimental fast reactor facility) (addition of experimental device for RI production, etc.) (hearing of opinions, etc.) - Hearing of opinions regarding permission to change facility operations for processing nuclear fuel materials at Mitsubishi Nuclear Fuel Co., Ltd. (addition of descriptions concerning work process for carrying out cleaning residue, etc.)
Sept. 11	- Application for permission for change of reactor installation for Shimane NPS (change of power reactor facility for Unit 2) (hearing of opinions) (installation of special facilities for severe accident management and permanent DC power supply (3rd system) in the station) - Notification of results of public comments on the proposed revision of the Guideline for Nuclear Emergency Preparedness and Response and complete revision thereof - Appointment of review commissioners of the Advisory Committee on Reactor Safety and the Advisory Committee on Nuclear Fuel Safety
Sept. 25	Revision of rules for partial revision of the Provisions of the NRA Ordinance Concerning the Installation and Operation of Commercial Power Reactors, etc. regarding the type of system, etc. (determination of proposed revision and notification of results of solicited public comments)
Oct. 16	- Approval of change in the operational safety program for power reactor facilities of Takahama PS, The Kansai Electric Power Company. (change of long-term facility management policy for Unit 1) - Approval of change in the operational safety program for power reactor facilities of Ikata NPS, Shikoku Electric Power Company. (addition of long-term facility management policy for Unit 3)
Oct. 23	Application for permission for change of reactor installation for Shimane NPS (change of power reactor facility for Unit 2) (permission) (installation of special facilities for severe accident management and permanent DC power supply (3rd system) in the station)
Oct. 31	Application for permission for change of reactor installation for Sendai NPS (change of power reactor facility for Units 1 and 2) (sharing of spent fuel storage facilities and replacement of motor-driven auxiliary feedwater pumps)
Nov. 6	- Application for permission for change of reactor installation for Mihama NPS (change of power reactor facility for Unit 3) (hearing of opinions) (change in the storage location for reduced-volume burnable poison, etc.) - Confirmation regarding pre-service inspection of the spent fuel storage facility at the Recycled Fuel Storage Center, Recyclable Fuel Storage Company, and issuance of pre-service confirmation certificate
Nov. 13	Application for permission for change of reactor installation for Tsuruga NPS

	(change of power reactor facility for Unit 2) (disposal)
Nov. 20	• Change of the NRA Annual Operational Plan for FY 2024 • Partial revision of handling procedures for sponsorship, etc. of the NRA
Dec. 4	• Hearing opinions on the FY 2024 Nuclear Energy Disaster Prevention Drill (answer) • Application for permission for change of reactor installation for Sendai NPS (change of power reactor facility for Units 1 and 2) (permission) (sharing of spent fuel storage facility and replacement of motor-driven auxiliary feedwater pump)
Dec. 11	• Application for permission for change of reactor installation for Mihama NPS (change of power reactor facility for Unit 3) (permission) (change of storage location for reduced-volume burnable poison, etc.)
Jan. 22	• Revision of relevant regulations, etc., accompanying the full-scale enforcement of the Act for Partial Revision of the Electricity Business Act, etc., to establish an electricity supply system for realizing a decarbonized society (determination of proposed revision and notification of results of solicited public comments)
Feb. 5	• Determination and publication of the NRA's medium-term targets for the third period
Feb. 12	• National designation of new medical cooperation institutions for nuclear emergency
Feb. 19	• Approval of appointment of executives at designated organizations implementing safeguard inspections
Mar. 5	• Approval of the Long-Term Facility Management Plan for Unit 3 of Genkai NPS, Kyushu Electric Power Company. • Matters for deliberations at the RSEC and the NFSEC • Determination and publication of “The NRA's Initiatives”
Mar. 12	• Partial revision of ordinances for organization of the NRA
Mar. 19	• Revision of NRA Service Continuity Plans (Measures against novel influenza, etc.)
Mar. 26	• Application for permission for change of reactor installation for Takahama PS (change of power reactor facility for Units 1, 2, 3, and 4) (hearing of opinions) (spent fuel dry storage facility) • Application for permission for change of reactor installation for Onagawa NPS (change of power reactor facility for Unit 2) (hearing of opinions) (spent fuel dry storage facility) • Determination and publication of the NRA Annual Operational Plan for FY 2025 • Status of reflection of basic policy assessment plan, FY 2025 policy assessment implementation plan, and policy assessment results (published in FY 2024) in the policy

10. Exchange of Opinions with Operators

(1) Exchange of Opinions between the NRA and Operators (CEOs)

Dates	Nuclear Operators
May 17, 2024	Kyushu Electric Power Company, Inc.
August 2, 2024	The Japan Atomic Power Company
November 13, 2024	Chubu Electric Power Company, Inc.
December 4, 2024	Shikoku Electric Power Company, Inc.

(2) Exchange of Opinions with Chief Nuclear Officers (CNOs) of Major Nuclear Power Facilities Installers

Dates	Nuclear Operators	Main Issues of Discussions
September 12, 2024	Tokyo Electric Power Company Holdings, Inc., Chubu Electric Power Company, Inc., The Kansai Electric Power Company, Inc., Hokuriku Electric Power Company, Mitsubishi Heavy Industries, Ltd. and Atomic Energy Association (ATENA)	- Regulations on “Innovative Light Reactor” - Improvement of the review process - Efforts to improve the safety of nuclear power plants based on the Noto Peninsula Earthquake
December 23, 2024	Tokyo Electric Power Company Holdings, Inc., Chubu Electric Power Company, Inc., Kansai Electric Power Company, Inc., Shikoku Electric Power Company, Inc., Central Research Institute of Electric Power Industry and Atomic Energy Association (ATENA)	- Exchange of opinions on utilization of risk information to improve the safety of nuclear power plants - Initiatives for on-line maintenance (OLM)
March 25, 2025	Tokyo Electric Power Company Holdings, Inc., Chubu Electric Power Company, Inc., The Kansai Electric Power Company, Inc., Tohoku Electric Power Company, Inc., The Chugoku Electric Power Company, Inc., Kyushu Electric Power Company, Inc., Japan Atomic Power Co., and Atomic Energy Association (ATENA)	- Response to “unknown-unknowns” - Efforts to utilize artificial intelligence (AI) by nuclear power operators

(3) Visits to Nuclear Facilities by NRA Commissioners

	Dates	Purposes	Visited locations (NPP, etc.)	Visiting Commissioner
1	April 4, 2024	On-site inspection	Fukushima Daiichi Nuclear Power Station, TEPCO	Commissioner ISHIWATARI
2	April 25 to 26, 2024	On-site investigation	Tomari Nuclear Power Plant of Hokkaido Electric Power Company.	Commissioner SUGIYAMA
3	June 6 to 7, 2024	On-site	Tsuruga Power Station of	Commissioner

		investigation	the Japan Atomic Power Company	ISHIWATARI
4	June 14, 2024	On-site investigation	Hamaoka Nuclear Power Station, Chubu Electric Power Company.	Commissioner TANAKA
5	June 28, 2024	On-site investigation	Rokkasho Reprocessing Plant and MOX Fuel Fabrication Plant of Japan Nuclear Fuel Limited	Commissioner TANAKA
6	July 4 to 5, 2024	On-site inspection	Naraha Center for Remote Control Technology Development, Japan Atomic Energy Agency and Fukushima Daiichi Nuclear Power Station, TEPCO	Chairman YAMANAKA
7	July 20, 2024	On-site inspection	Shimane Nuclear Power Station, Chugoku Electric Power Company.	Chairman YAMANAKA Commissioner BAN
8	July 30, 2024	On-site inspection	Ningyo-toge Environmental Engineering Center, Japan Atomic Energy Agency	Commissioner TANAKA
9	August 19 to 20, 2024	On-site investigation	Northern coast and northeastern part of the Noto Peninsula Northern part of Kaga	Commissioner ISHIWATARI
10	August 22 to 23, 2024	On-site inspection	Fukushima Daiichi Nuclear Power Station, TEPCO	Commissioner TANAKA
11	September 5 to 6, 2024	On-site inspection	Ikata Nuclear Power Station, Shikoku Electric Power Company.	Commissioner SUGIYAMA
12	October 4, 2024	On-site investigation, etc.	Rokkasho Reprocessing Plant and MOX Fuel Fabrication Plant of Japan Nuclear Fuel Limited	Commissioner NAGASAKI
13	October 10 to 11,	On-site	Fukushima Daiichi Nuclear	Chairman

	2024	inspection	Power Station, TEPCO	YAMANAKA
14	October 18, 2024	On-site inspection	Nuclear Fuel Cycle Engineering Laboratories, Japan Atomic Energy Agency	Commissioner NAGASAKI
15	October 24 to 25, 2024	On-site investigation	Tomari Nuclear Power Plant of Hokkaido Electric Power Company.	Commissioner YAMAOKA
16	December 16 to 17, 2024	On-site investigation	Hamaoka Nuclear Power Station, Chubu Electric Power Company.	Commissioner YAMAOKA
17	January 16 to 17, 2025	On-site inspection	Fukushima Daiichi Nuclear Power Station, TEPCO Collaborative Laboratories for Advanced Decommissioning Science, Japan Atomic Energy Agency	Chairman YAMANAKA
18	January 24, 2025	On-site inspection	Ikata Nuclear Power Station, Shikoku Electric Power Company.	Commissioner BAN Commissioner NAGASAKI
19	January 28, 2025	On-site inspection	Genkai Nuclear Power Station of Kyushu Electric Power Company.	Commissioner SUGIYAMA
20	February 3, 2025	On-site investigation, etc.	Ohmi Nuclear Power Station, Kansai Electric Power Company.	Commissioner YAMAOKA
21	February 6 to 7, 2025	On-site inspection	Fukushima Daiichi Nuclear Power Station, TEPCO	Commissioner BAN Commissioner NAGASAKI
22	February 17 to 18, 2025	On-site inspection	Takahama Power Station of Kansai Electric Power Company.	Commissioner SUGIYAMA

23	March 7, 2025	On-site inspection	Prototype Advanced Converter Reactor FUGEN and Prototype Fast Breeder Reactor MONJU, Japan Atomic Energy Agency	Commissioner NAGASAKI

11. Meetings and Opinion Exchange with Local Parties

(1) Meetings with Local Parties

Dates	Meeting with	NRA Representatives
April 5, 2024	Governor of Tottori Prefecture	Secretary- General
May 28, 2024	Prefectural Government Assembly on Nuclear Power	Secretary- General
June 5, 2024	Governor of Shimane Prefecture	Secretary- General
June 6, 2024	Governor of Niigata Prefecture	Secretary- General
July 10, 2024	Governor of Aomori Prefecture, President of Hirosaki University	Secretary- General
July 22, 2024	Liberal Democratic Party members of the Niigata Prefectural Assembly	Deputy Secretary- General
July 23, 2024	Deputy Mayor of Himi City	Deputy Secretary- General
July 25, 2024	Deputy Chairperson of Greater Fukuoka Administrative Promotion Council	Deputy Secretary- General
August 28, 2024	Chairperson of the Special Committee for Measures for Nuclear Power Generation of National Governors' Association (Governor of Hokkaido Prefecture)	Secretary- General
October 11, 2024	Governor of Tottori Prefecture, Mayor of Yonago City, Mayor of Sakaiminato City	Secretary- General
November 5, 2024	Governor of Shimane Prefecture	Secretary- General
December 25, 2024	Prefectural Government Assembly on Nuclear Power	Secretary- General
December 25, 2024	Governor of Tottori Prefecture, Mayor of Yonago City, Mayor of Sakaiminato City	Secretary- General
January 10, 2025	Mayor of Matsue City	Deputy Secretary- General

March 28, 2025	Governor of Shimane Prefecture	Secretary- General

(2) Exchange of Opinions with Local Stakeholders by Committee Members

Dates	Overview	Attendees	Representing Commissioners
July 20, 2024	Discussions with local stakeholders on regulatory issues related to nuclear facilities	Governor of Shimane Prefecture, Mayor of Matsue City, Mayor of Izumo City, Mayor of Unnan City, Mayor of Yasugi City, Governor of Tottori Prefecture, Mayor of Yonago City, Mayor of Sakaiminato City, etc.	Chairman YAMANAKA Commissioner BAN
January 24, 2025	Discussions with local stakeholders on regulatory issues related to nuclear facilities	Governor of Ehime Prefecture, Mayor of Ikata Town, Mayor of Yawatahama City, Mayor of Ozu City, Mayor of Seiyo City, Mayor of Uwajima City, Mayor of Iyo City, Deputy Mayor of Uchiko Town, etc.	Chairman YAMANAKA (attended on-line) Commissioner BAN Commissioner NAGASAKI

(3) Results of On-site Exchange of Opinions with Local Stakeholders by Officials of the Nuclear Regulation Authority

Dates	Venues	Names of meeting/ session	Main attendees
April 4, 2024 May 23, 2024 (twice in total)	Hokkaido	Exchange of opinions on industrial accidents, etc.	Otaru Labor Standards Inspection Office, Kutchan Branch Office
April 10, 2024	Hokkaido	Exchange of opinions on fire protection	Iwanai-Suttu Regional Fire Department Association, Tomari Branch Office
May 16, 2024 to February 20, 2025 (4 times in total)	Hokkaido	Briefing on the nuclear regulatory inspection results	Municipalities
April 2, 2024 to December 24, 2024 (4 times in total)	Aomori Prefecture	Opinion exchange on nuclear regulatory inspections, etc.	Higashidori Village
April 25, 2024	Aomori Prefecture	Opinion exchange concerning cooperation with labor standards inspection office	Mutsu Labor Standards Inspection Office
May 14, 2024 to February 17, 2025 (4 times in total)	Aomori Prefecture	Opinion exchange on nuclear regulatory inspections, etc.	Rokkasho Village

May 15, 2024 to February 19, 2025 (9 times in total)	Aomori Prefecture	Explanation and opinion exchange regarding the nuclear regulation	Aomori Prefectural Press Association, Aomori Prefectural Government
June 4, 2024	Aomori Prefecture	Mutsu City Council Special Committee for Investigation and Study of Interim Spent Fuel Storage Facility	Members of Mutsu City Council
June 12, 2024	Aomori Prefecture	Aomori Prefectural Assembly Special Committee on Countermeasures for Nuclear Power and Energy	Members of Aomori Prefectural Assembly
June 17, 2024 February 19, 2025 (twice in total)	Aomori Prefecture	Aomori Prefecture Nuclear Policy Committee	Organization representatives, experts, local residents, etc.
June 17, 2024	Aomori Prefecture	Aomori Prefecture Conference of Mayors of All Municipalities	Mayors of municipalities
August 20, 2024 to February 20, 2025 (3 times in total)	Aomori Prefecture	Opinion exchange on nuclear regulatory inspections, etc.	Mutsu City
October 24, 2024 to November 15, 2024 (4 times in total)	Aomori Prefecture	Opinion exchange meeting on Aomori Prefecture nuclear power	Residents (Nishimeya Village, Fukaura Town, Shichinohe Town, Sannohe Town), etc.
May 13, 2024 to March 6, 2025 (4 times in total)	Miyagi Prefecture	Nuclear emergency system reinforcing working group meeting	Municipalities
May 15, 2024	Miyagi Prefecture	Nuclear energy administration section managers meeting	Municipalities
May 21, 2024 to February 21, 2025 (4 times in total)	Miyagi Prefecture	Explanation and opinion exchange regarding the nuclear regulation	Municipalities
August 9, 2024 October 14, 2024 (twice in total)	Miyagi Prefecture	Miyagi Prefecture nuclear emergency system reinforcing working group meeting	Municipalities
August 20, 2024 October 29, 2024 (twice in total)	Miyagi Prefecture	General meeting for nuclear emergency by concerned institutions	Municipalities, etc.
April 24, 2024 to March 21, 2025 (5 times in total)	Fukushima Prefecture	Fukushima Prefectural Council for Safety Monitoring of Reactor Decommissioning	Municipalities, experts
June 11, 2024 January 28, 2025 (3 times in total)	Fukushima Prefecture	Fukushima Prefectural Council for Ensuring the Safety of Reactor Decommissioning	Local residents, various organizations, experts
June 14, 2024 to February 19, 2025 (3 times in total)	Fukushima Prefecture	Fukushima Prefecture Labor Safety and Health Subcommittee	Municipalities, experts
October 1, 2024	Fukushima Prefecture	Naraha Nuclear Facility Monitoring Committee	Experts
January 21, 2025	Fukushima Prefecture	Training for establishing and operating local emergency response headquarters	Municipalities, relevant bodies

April 10, 2024 to March 5, 2025 (11 times in total)	Niigata Prefecture	Regional Panel for Ensuring Transparency of Kashiwazaki-Kariwa NPS	Experts, municipalities, operator, related ministries and agencies
April 16, 2024 to November 6, 2024 (4 times in total)	Niigata Prefecture	Niigata Prefecture Technology Committee Meeting	Experts, municipalities
May 10, 2024 November 11, 2024 (twice in total)	Niigata Prefecture	Municipal Study Group on Nuclear Safety Measures	Experts, municipalities, operator, related ministries and agencies
May 16, 2024 to February 21, 2025 (4 times in total)	Niigata Prefecture	Briefing on the nuclear regulatory inspection results	Relevant municipalities
July 15, 2024 to August 10, 2024 (6 times in total)	Niigata Prefecture	Public briefing on the review results concerning the new regulation requirements for Unit 7 of Kashiwazaki-Kariwa NPS	Residents within the UPZ (Nagaoka City, Tokamachi City, Ojiya City, Mitsuke City, Joetsu City, and Izumozaki Town (in order of event date))
September 2, 2024	Niigata Prefecture	Kashiwazaki City Disaster Prevention Conference	Mayor of Kashiwazaki City, officials of designated public agencies, public bodies, and other important disaster prevention organizations
November 8, 2024	Niigata Prefecture	Association Communities for Ensuring Transparency of Kashiwazaki-Kariwa NPS information sharing meeting	Heads of municipalities, experts, municipalities, operators, related ministries and agencies
November 13, 2024 November 14, 2024 (twice in total)	Niigata Prefecture	Niigata Prefecture Drawing Exercise	Municipalities
February 12, 2025	Niigata Prefecture	Niigata Prefecture Technology Liaison Meeting	Relevant municipalities and experts
February 18, 2025	Niigata Prefecture	Fire prevention and safety liaison committee	Municipalities, public fire department, operators
March 14, 2025	Niigata Prefecture	Explanation of the review results concerning the new regulatory requirements, etc. for Unit 7 of Kashiwazaki-Kariwa NPS at the Niigata Prefectural Assembly	Niigata Prefectural Assembly
May 15, 2024 to February 21, 2025 (4 times in total)	Ibaraki Prefecture	Explanation regarding the nuclear regulation inspection results	Relevant municipalities
June 4, 2024	Ibaraki Prefecture	Ibaraki Prefecture Briefing on Notification Liaison Drills	Prefectural government, relevant municipalities, operators

January 16 to 17, 2025	Ibaraki Prefecture	Disaster Imagination Game by Relevant Bodies	Relevant municipalities and relevant bodies
February 10, 2025	Ibaraki Prefecture	Tokai Village disaster prevention conference	Tokai Village and relevant bodies
May 15, 2024	Kanagawa Prefecture	Nuclear Disaster Prevention Information Liaison Committee	Municipalities, Self-Defense Forces
May 17, 2024 to February 20, 2025 (4 times in total)	Kanagawa Prefecture	Explanation and opinion exchange regarding the nuclear regulation	Relevant municipalities
September 13, 2024	Kanagawa Prefecture	Kawasaki Off-Site Center Disaster Imagination Game	Municipalities, Self-Defense Forces, Japan Coast Guard, operators
September 27, 2024	Kanagawa Prefecture	Yokosuka Off-site Center Disaster Imagination Game	Municipalities, Self-Defense Forces, Japan Coast Guard, operators
October 29, 2024	Kanagawa Prefecture	Kawasaki Nuclear Facility Safety Committee Secretariat Meeting	Municipalities, operators, etc.
November 25, 2024	Kanagawa Prefecture	Kawasaki Nuclear Facility Safety Committee	Municipalities, operators, etc.
January 17, 2025	Kanagawa Prefecture	Opinion exchange with Yokosuka-minami Police Station regarding disaster prevention	Yokosuka-minami Police Station
February 6, 2025	Kanagawa Prefecture	Kurihama District nuclear emergency preparedness drills	Yokosuka City, citizens, operators
April 19, 2024 to January 23, 2025 (12 times in total)	Shizuoka Prefecture	Opinion exchange associated with status confirmation of Off- Site Center by Staff Members Involved in risk management of municipality and members of municipal assemblies	Shizuoka Prefecture, relevant municipalities, relevant bodies, etc.
June 21, 2024	Shizuoka Prefecture	Omaezaki City Special Committee on Nuclear Countermeasures	Members of Omaezaki City Council, relevant bodies, etc.
June 27, 2024	Shizuoka Prefecture	General Meeting of Countermeasures Council for Safety, etc. for Hamaoka NPS	Members of City Council, relevant bodies, etc.
December 12, 2024 January 20, 2025 (twice in total)	Shizuoka Prefecture	Shizuoka Prefecture Nuclear Emergency Preparedness Drills Preliminary Coordination Conference	Shizuoka Prefecture, relevant municipalities, relevant bodies, etc.
December 13, 2024	Shizuoka Prefecture	Regional Liaison Committee (Hamaoka) on Nuclear Emergency Preparedness	Shizuoka Prefecture, Omaezaki City, relevant bodies, etc.
January 29, 2025	Shizuoka Prefecture	Shizuoka Prefecture Disaster Imagination Game for Nuclear Disaster Preparedness	Shizuoka Prefecture, relevant municipalities, relevant bodies, etc.
May 15, 2024 to February 19, 2025 (4 times in total)	Ishikawa Prefecture	Explanation regarding the nuclear regulation inspection results	Shika Town

July 5, 2024 November 25, 2024 (twice in total)	Ishikawa Prefecture	Shika Town "Nuclear Power Station" Safety Promotion Committee	Heads of municipalities, representatives of residents, etc.
July 5, 2024 to March 13, 2025 (3 times in total)	Ishikawa Prefecture	Joint Meeting of Akasumi Area Committee and Safety Promotion Liaison Committee	Heads of municipalities, representatives of residents, etc.
July 10, 2024 July 11, 2024 (twice in total)	Ishikawa Prefecture	Discussion on handling of evacuees in the event of natural disasters	Ishikawa Prefecture, Shika Town
July 29, 2024 to March 21, 2025 (4 times in total)	Ishikawa Prefecture	Ishikawa Prefecture Nuclear Environmental Safety Management Council	Relevant municipalities
August 9, 2024	Ishikawa Prefecture	Inspection of Off-Site Center by the Deputy Governor of Ishikawa Prefecture	Deputy Governor of Ishikawa Prefecture, etc.
November 24, 2024	Ishikawa Prefecture	FY 2024 Ishikawa Prefecture Nuclear Energy Disaster Prevention Drill	Relevant municipalities
November 24, 2024	Toyama Prefecture	FY 2024 Toyama Prefecture Nuclear Energy Disaster Prevention Drill	Relevant municipalities
April 12, 2024 to March 12, 2025 (3 times in total)	Fukui Prefecture	Explanation of NRA's topics to Wakasa Town	Officials of Wakasa Town
April 23, 2024 to February 16, 2025 (4 times in total)	Fukui Prefecture	Explanation of NRA's topics to Obama City	Officials of Obama City
April 25, 2024 to December 18, 2024 (5 times in total)	Fukui Prefecture	Explanation of NRA's topics to Tsuruga City	Officials of Tsuruga City
May 14, 2024 to February 17, 2025 (4 times in total)	Fukui Prefecture	Explanation regarding the nuclear regulation inspection results	Officials of Ohi Town
May 15, 2024 to February 15, 2025 (4 times in total)	Fukui Prefecture	Fukui Prefecture NPP liaison meeting	Officials of relevant municipalities
May 16, 2024	Fukui Prefecture	Explanation to students of Mihama Junior High School	Mihama Junior High School students
May 17, 2024 to November 22, 2024 (3 times in total)	Fukui Prefecture	Explanation at Fukui Prefecture Nuclear and Industrial Safety Agency Expert Committee	Experts
May 29, 2024	Fukui Prefecture	Inspection of Tsuruga Off-Site Center by officials of Fukui Prefectural Police	Officials of Security Division, Fukui Prefectural Police
July 4, 2024 to February 25, 2025 (4 times in total)	Fukui Prefecture	Explanation at Fukui Prefecture Nuclear Environmental Safety Management Council	Representatives of heads of the groups in Fukui Prefecture, head of local governments and members of prefectural assembly, etc.
July 8, 2024	Fukui Prefecture	Inspection of Tsuruga Off-Site Center by JGSDF 10th Division Nuclear Biological Chemical	Commander and members of JGSDF 10th Division Nuclear

		Weapon Defense Unit members	Biological Chemical Weapon Defense Unit
July 24, 2024	Fukui Prefecture	Explanation to the representatives of Fukui Prefectural Police Tsuruga Station	Officials of Fukui Prefectural Police
September 13, 2024	Fukui Prefecture	Inspection of Tsuruga Off-Site Center by residents of Oma Town	Residents of Oma Town
September 19, 2024	Fukui Prefecture	Explanation at Wakasa Nuclear Power Station Environmental Safety Council	Mayor of Town, representatives of organizations, residents
October 25, 2024 to October 26, 2024	Fukui Prefecture	Fukui Prefecture Nuclear Energy Disaster Prevention Drill	Municipalities, etc.
November 28, 2024	Fukui Prefecture	Explanations to students of The University of Osaka, etc.	Students, etc.
December 10, 2024 March 28, 2025 (2 times in total)	Fukui Prefecture	Training session for members of Obama City Nuclear Power Station Environmental Safety Council	Mayor of City, City Council members, residents, etc.
December 17, 2024	Fukui Prefecture	Mihama Town Nuclear Environmental Safety Monitoring Committee	Town Council members, representatives of residents, etc.
January 10, 2025	Fukui Prefecture	Tsuruga City Disaster Prevention Conference	Heads of municipalities, experts
January 15, 2025	Fukui Prefecture	Firefighting information liaison committee of Fukui Prefecture nuclear power plants, etc.	Municipalities (Tsuruga Mikata Fire Department officials, etc.)
January 17, 2025	Fukui Prefecture	Inspection of Tsuruga Off-Site Center by officials of Oma Town	Officials of Oma Town
February 13, 2025	Fukui Prefecture	Inspection of operator's comprehensive firefighting drills by Firefighting Information Liaison Committee of Fukui Prefecture nuclear power plants, etc.	Municipalities (Tsuruga Mikata Fire Department officials, etc.)
February 26, 2025	Fukui Prefecture	Ohi Town disaster prevention conference	Ohi Town and relevant bodies
March 5, 2025	Fukui Prefecture	Explanations to students of Shizuoka University, etc.	Students, etc.
March 13, 2025 March 14, 2025 (twice in total)	Fukui Prefecture	Explanation to Nuclear Facility Security Unit	Fukui Prefectural Police Nuclear Facility Security Unit officers
March 16, 2025	Fukui Prefecture	Explanation to NEXCO CENTRAL	Employees of NEXCO CENTRAL
March 26, 2025	Fukui Prefecture	Inspection of Ohi Off-Site Center by JGSDF 10th Division	Commander of JGSDF 10th Division, etc.

November 16, 2024	Gifu Prefecture	Nuclear Emergency Preparedness Drill	Municipalities, relevant bodies
August 6, 2024	Shiga Prefecture	Shiga Prefecture Nuclear Safety Measures Liaison Council	Shiga Prefecture
January 21 to 22, 2025	Shiga Prefecture	Shiga Prefecture Nuclear Emergency Preparedness Drills	Municipalities, relevant bodies
August 13, 2024	Kyoto Prefecture	Explanation at Kyoto Prefecture Regional Council/Secretariat Meeting concerning Takahama PS	Officials of Kyoto Prefecture, Deputy Mayors of relevant municipalities, academic experts, etc.
December 1, 2024	Kyoto Prefecture	Kyoto Prefecture Nuclear Energy Disaster Prevention Drill	Municipalities, relevant bodies
May 21, 2024	Osaka Prefecture	Nuclear facilities liaison conference	Higashiosaka City, Osaka Prefectural Police, public fire departments, operators
May 22, 2024 to February 26, 2025 (4 times in total)	Osaka Prefecture	Explanation regarding the nuclear regulation inspection results	Relevant municipalities
May 24, 2024 March 14, 2025 (2 times in total)	Osaka Prefecture	Kumatori Town Radiation Disaster Prevention Measures Liaison Council	Operators, Izumisano Police Station, Senshuminami Fire Department, municipalities
July 30, 2024 March 18, 2025 (2 times in total)	Osaka Prefecture	Kumatori Town Nuclear Problems Countermeasures Council	Town Council members, representative of residents, experts, municipalities
August 5, 2024	Osaka Prefecture	Izumisano City Nuclear Problems Countermeasures Council	City Council members, representative of residents, experts, municipalities
August 6, 2024	Osaka Prefecture	Osaka Prefecture Environmental Radiation Evaluation Meeting	Municipalities, experts, operators
May 20, 2024 to February 26, 2025 (8 times in total, web conference)	Okayama Prefecture	Briefing on the nuclear regulatory inspection results	Relevant municipalities
August 16, 2024	Okayama Prefecture	Discussion regarding the contents of field training in nuclear disaster preparedness drills	Municipalities, Tsuyama Regional Firefighting Association
May 15, 2024 to February 20, 2025 (3 times in total)	Shimane Prefecture	Briefing on the nuclear regulatory inspection results	Municipalities
June 3, 2024	Shimane Prefecture	Unnan City disaster prevention conference	Heads of local governments, experts

February 17, 2025	Shimane Prefecture	Matsue City disaster prevention conference	Heads of municipalities, experts
May 16, 2024 February 7, 2025 (twice in total)	Ehime Prefecture	Explanation regarding the nuclear regulation inspection results	Relevant municipalities
January 31, 2025	Ehime Prefecture	Regional Liaison Committee	Relevant bodies, operators
April 15, 2024 to January 22, 2025 (4 times in total)	Saga Prefecture	Explanation regarding the nuclear regulation inspection results	Relevant municipalities
August 16, 2024 February 3, 2025 (twice in total)	Saga Prefecture	Saga Prefecture Nuclear Environmental Safety Liaison Council	Heads of municipalities, representatives of residents, operators
January 21, 2025	Saga Prefecture	Regional Liaison Committee on Nuclear Emergency Preparedness	Relevant institutions, relevant municipalities, operators
April 10, 2024 to January 29, 2025 (4 times in total)	Kagoshima Prefecture	Nuclear power generation- related cities manager meeting	Municipalities, relevant bodies, operators
May 27, 2024 to March 12, 2025 (4 times in total)	Kagoshima Prefecture	Satsuma Sendai City Nuclear Safety Measures Promotion Council	Heads of municipalities, Members of Municipal Assemblies, relevant bodies, representatives of residents, etc.
August 16, 2024	Kagoshima Prefecture	Nuclear Safety Measures Liaison Council	Heads of municipalities, assembly members, relevant bodies, operator, etc.
January 16, 2025	Kagoshima Prefecture	Kagoshima Prefecture Nuclear Safety - Special Committee on Disaster Prevention including Evacuation Planning, etc.	Experts, governor, municipalities, operators, etc.

*In addition to those stated in the table, meetings of working groups of local nuclear preparedness councils and committees on radiation oversight or monitoring are occasionally held in relevant prefectures, and the personnel of the NRA Secretariat attend.

(4) Explanations on Results of Review of Nuclear Facilities

Dates	Venues	Names of meeting/ session	Contents
April 16, 2024	Niigata Prefecture	Niigata Prefecture Technical Committee on Safety Management of Nuclear Power Plants	Explanation of matters answered as “to be confirmed in subsequent review” in response to questions regarding the review content of the permission for change of reactor installation for

			Units 6 and 7 of Kashiwazaki-Kariwa NPS
May 17, 2024	Fukui Prefecture	Fukui Prefecture Safety Expert Council	Explanation concerning the results of supplemental inspections of Unit 3 of Takahama PS, The Kansai Electric Power Company., and the extension of operation of Units 3 and 4
May 27, 2024	Aomori Prefecture	Briefing for prefectural assembly members	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
May 28, 2024	Tokyo Metropolitan	Prefectural Government Assembly on Nuclear Power	Explanation concerning the status of Licensing Review of Conformity to the New Regulatory Requirements of Nuclear Power Plants
June 6, 2024	Aomori Prefecture	Aomori Prefecture Nuclear Policy Committee	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
June 6, 2024	Aomori Prefecture	Aomori Prefecture Conference of Section Managers in Charge of Municipalities	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
June 17, 2024	Aomori Prefecture	Aomori Prefecture Conference of Mayors of All Municipalities	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
June 26, 2024	Shimane Prefecture	Special Committee for Measures for Nuclear Power Generation	Explanation of the review results concerning the approval of facility construction and operational safety

		Matsue City Nuclear Power Station Environmental Safety Council	program for Unit 2 of Shimane Power Station, The Chugoku Electric Power Company.
June 28, 2024	Fukui Prefecture	Fukui Prefecture Safety Expert Council	Explanation concerning the review of the change permission for reactor installation related to replacement of steam generators, etc. for Units 3 and 4 of Takahama PS, The Kansai Electric Power Company., and the extension of operation thereof (over 40 years of operation)
July 2, 2024	Aomori Prefecture Aomori City Venue	Briefing for residents of Aomori Prefecture	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
July 3, 2024	Aomori Prefecture Mutsu City Venue	Briefing for residents of Aomori Prefecture	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
July 4, 2024	Aomori Prefecture Hachinohe City Venue	Briefing for residents of Aomori Prefecture	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
July 4, 2024	Aomori Prefecture Towada City Venue	Briefing for residents of Aomori Prefecture	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
July 4, 2024	Fukui Prefecture	Fukui Prefecture Nuclear Expert Council	Explanation concerning the approval for extension of operation, etc. for Units 3 and 4 of Takahama PS, The Kansai Electric Power Company.

July 5, 2024	Aomori Prefecture Hirosaki City Venue	Briefing for residents of Aomori Prefecture	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
July 5, 2024	Aomori Prefecture Goshogawara City Venue	Briefing for residents of Aomori Prefecture	Explanation concerning the status of licensing review of conformity to the new regulatory requirements and inspections of the Recyclable Fuel Storage Center
July 5, 2024	Shimane Prefecture	Shimane Prefecture Nuclear and Industrial Safety Agency Advisory Board Assembly Shimane Prefecture Nuclear Power Plant/Nuclear Power Station Safe Council of Ambient Surroundings	Explanation concerning the review results, etc. for Unit 2 of Shimane NPS, The Chugoku Electric Power Company.
July 8, 2024	Tottori Prefecture	Tottori Prefecture Nuclear and Industrial Safety Advisory Board Assembly	Explanation concerning the review results, etc. for Units 1 and 2 of Shimane NPS, The Chugoku Electric Power Company.
July 15, 2024	Niigata Prefecture Nagaoka Venue	Briefing for residents on the national government's initiatives for Kashiwazaki- Kariwa NPS	Explanation concerning the summary of review on Unit 7 of Kashiwazaki-Kariwa NPS, TEPCO
July 20, 2024	Niigata Prefecture Tokamachi Venue	Briefing for residents on the national government's initiatives for Kashiwazaki- Kariwa NPS	Explanation concerning the summary of review on Unit 7 of Kashiwazaki-Kariwa NPS, TEPCO
July 21, 2024	Niigata Prefecture Ojiya Venue	Briefing for residents on the national government's initiatives for Kashiwazaki- Kariwa NPS	Explanation concerning the summary of review on Unit 7 of Kashiwazaki-Kariwa NPS, TEPCO
July 27, 2024	Niigata Prefecture Mitsuke Venue	Briefing for residents on the national government's initiatives for Kashiwazaki- Kariwa NPS	Explanation concerning the summary of review on Unit 7 of Kashiwazaki-Kariwa NPS, TEPCO
July 28, 2024	Niigata Prefecture Joetsu Venue	Briefing for residents on the national government's initiatives for Kashiwazaki- Kariwa NPS	Explanation concerning the summary of review on Unit 7 of

			Kashiwazaki-Kariwa NPS, TEPCO
August 4, 2024	Niigata Prefecture Tsubame Venue	Briefing for residents on the national government's initiatives for Kashiwazaki-Kariwa NPS	Explanation concerning the summary of review on Unit 7 of Kashiwazaki-Kariwa NPS, TEPCO
August 6, 2024	Shiga Prefecture	Shiga Prefecture Nuclear Safety Measures Liaison Council	Explanation of the review results concerning the approval of extension of operational period for Units 3 and 4 of Takahama PS, The Kansai Electric Power Company.
August 10, 2024	Niigata Prefecture Izumo-zaki Venue	Briefing for residents on the national government's initiatives for Kashiwazaki-Kariwa NPS	Explanation concerning the summary of review on Unit 7 of Kashiwazaki-Kariwa NPS, TEPCO
September 9, 2024	Tottori Prefecture	Tottori Prefecture Nuclear Safety Measures Joint Conference	Explanation concerning the review results of the Latter Regulations for Unit 2 of Shimane NPS, The Chugoku Electric Power Company.
September 13, 2024	Tottori Prefecture	Tottori Prefectural Assembly Area Prefectural Land Police Standing Committee	Explanation concerning the summary of review on Unit 2 of Shimane NPS, The Chugoku Electric Power Company., and on installation of special facilities for severe accident management and permanent DC power supply (3rd system) in the station
September 19, 2024	Fukui Prefecture	Wakasa Nuclear Power Station Environmental Safety Council	Explanation concerning the summary of review results for Unit 2 of Tsuruga NPS, The Japan Atomic Power Co.
October 11, 2024	Fukui Prefecture	Fukui Prefecture Atomic Environment Safety Control Association	Explanation concerning the summary of review results for Unit 2 of Tsuruga NPS, The Japan Atomic Power Co.
November 6, 2024	Shimane Prefecture	Briefing for Shimane Prefecture Municipal Officials	Explanation concerning the review results of the application for permission for change of reactor installation for Unit 2 of Shimane NPS,

			The Chugoku Electric Power Company.
November 11, 2024	Niigata Prefecture	Municipal Study Group Meeting of Working-level Officials	Explanation concerning the interim summary of “Study Team on Operation of Sheltering in Place in the Event of Nuclear Emergency” and the current status of nuclear regulatory inspections for Kashiwazaki-Kariwa NPS
November 15, 2024	Tokyo Metropolitan	Prefectural Government Assembly on Nuclear Power	Explanation concerning the status of licensing review of conformity to the new regulatory requirements, etc.
November 15, 2024	Ehime Prefecture	Ikata Nuclear Power Plant Environmental Safety Management Committee Nuclear Specialized Safety Subcommittee	Explanation concerning the Long-Term Facility Management Plan (30th Year) for Unit 3 of Ikata NPS and the status of Ikata NPS
November 22, 2024	Fukui Prefecture	Fukui Prefecture Nuclear Expert Council	Explanation of the review results concerning technical assessment of aging management for Unit 1 of Takahama PS, The Kansai Electric Power Company., and the summary of review results for Unit 2 of Tsuruga NPS
November 27, 2024	Ehime Prefecture	Environmental Monitoring Committee of Ikata Town Ikata Town Special Committee for Measures for Nuclear Power Generation	Explanation concerning the review results of technical assessment of aging management, etc. for Unit 3 of Ikata NPS, Shikoku Electric Power Company.
December 10, 2024	Fukui Prefecture	Obama City Environmental Safety Council	Explanation concerning the review results for the operation of Units 3 and 4 of Takahama PS for over 40 years and the Long-term Facility Management Plan for over 30 years for Units 3 and 4 of Ohi NPS, The Kansai Electric Power Company.
December 13, 2024	Shimane Prefecture	Matsue City Council Plenary Session	Explanation concerning the review results of the

		Matsue City Nuclear Power Station Environmental Safety Council	application of the change permission for installation of special facilities for severe accident management and permanent DC power supply (3rd system) in the station for Unit 2 of Shimane NPS, The Chugoku Electric Power Company.
December 17, 2024	Fukui Prefecture	Mihama Town Nuclear Environmental Safety Monitoring Committee	Explanation concerning the summary of review results for Unit 2 of Tsuruga NPS, The Japan Atomic Power Co.
January 16, 2025	Kagoshima Prefecture	Kagoshima Prefecture Nuclear Safety - Special Committee on Disaster Prevention including Evacuation Planning, etc.	Explanation concerning the review results of Long-Term Facility Management Plan for Units 1 and 2 of Sendai NPS, Kyushu Electric Power Company.
March 14, 2025	Niigata Prefecture	Niigata Prefectural Assembly Joint Committee	Explanation concerning the review results of the licensing review of conformity to the new regulatory requirements, etc. for Unit 7 of Kashiwazaki-Kariwa NPS, TEPCO
March 28, 2025	Fukui Prefecture	Obama City Environmental Safety Council	Explanation concerning the establishment of guidelines for the review guide for spent fuel storage using dry casks for storage and transportation in the site of the nuclear power plant

(5) Opinion Exchanges between Commissioners and Students, etc.

Dates	Affiliation of Students, etc.	Representing Commissioners
August 5, 2024	Osaka Metropolitan University	Commissioner ISHIWATARI
November 5, 2024	Hokkaido University	Commissioner SUGIYAMA
January 17, 2025	National Institute of Technology, Fukushima College	Chairman YAMANAKA

March 5, 2025	Tohoku Institute of Technology, etc. (held at the NRA)	Commissioner SUGIYAMA Commissioner YAMAOKA

*Provided for educational institutions implementing the NRA Human Resources Development Program

12. Record of Opinion Exchange with Foreign Experts, etc.

(1) Opinion Exchange with Foreign Experts

Dates	Attendees	Representing Commissioners
November 11, 2024	Richard A. Meserve, External Advisor Dana Drábová, External Advisor Philippe Jamet, External Advisor Rumina Velshi, External Advisor	Chairman YAMANAKA Commissioner BAN Commissioner SUGIYAMA Commissioner NAGASAKI Commissioner YAMAOKA

(2) Opinion Exchange with Foreign Regulatory Authorities

Dates	Participants, Meetings Attended	Representing Commissioners
May 3 to 4, 2024	International Nuclear Regulators Association (INRA) (nuclear regulators from the United States, United Kingdom, France, Germany, Canada, Spain, Sweden, and South Korea)	Chairman YAMANAKA
September 16, 2024	International Nuclear Regulators Association (INRA) (nuclear regulators from the United States, United Kingdom, France, Germany, Canada, Spain, Sweden, and South Korea)	Chairman YAMANAKA

September 16, 2024	Director General Knochenhauer of the Swedish Radiation Safety Authority (SSM)	Chairman YAMANAKA
September 16, 2024	Chairman Doroszczuk of the French Nuclear Safety Authority (ASN)	Chairman YAMANAKA
November 19 to 20, 2024	Chairman Abadie and Commissioner Bresson of the French Nuclear Safety Authority (ASN)	Commissioner SUGIYAMA
November 26, 2024	Director General Niel of the France Institute for Radiation Protection and Nuclear Safety (IRSN)	Chairman YAMANAKA Commissioner SUGIYAMA
March 11, 2025	Director General Tiippana of the Finnish Radiation and Nuclear Safety Authority (STUK)	Commissioner SUGIYAMA
March 11, 2025	Commissioner Marzano of the U.S. Nuclear Regulatory Commission (NRC)	Commissioner SUGIYAMA
March 11, 2025	Commissioner Lachaume of the French Nuclear Safety and Radiation Protection Authority (ASNR)	Commissioner SUGIYAMA
March 11, 2025	Executive Director for Operations Gavrilas of the U.S. Nuclear Regulatory Commission (NRC)	Commissioner SUGIYAMA
March 17, 2025	Chief Executive and Chief Nuclear Inspector Foy of the UK Office for Nuclear Regulation (ONR)	Commissioner NAGASAKI
March 18, 2025	Director General Kenzelmann of the Swiss Federal Nuclear Safety Inspectorate (ENSI)	Commissioner NAGASAKI
March 19, 2025	Commissioner Bresson of the French Nuclear Safety and Radiation Protection Authority (ASNR)	Commissioner NAGASAKI

13. Continuous Improvement of Management

(1) Internal Audit of Management System

In FY 2024, six divisions were subject to internal audits

- ・ Sasebo Nuclear-Powered Warship Monitoring Center (July 9, 2024)

- Sendai NRA Regional Office (July 10 and July 11, 2024)
- Environmental Radioactivity Office (August 22, 2024)
- Kashiwazaki-Kariwa NRA Regional Office (October 17 and October 18, 2024)
- Information Systems Office and Office for Public Records Management and Information Technology (December 24, 2024)
- Reactor Technology Training Programs Division (NRA Human Resource Development Center) (January 7 and 9, 2025)

Overall, no items required improvement, with seven items classified as desirable for issues recommended improvement and 14 good practices.

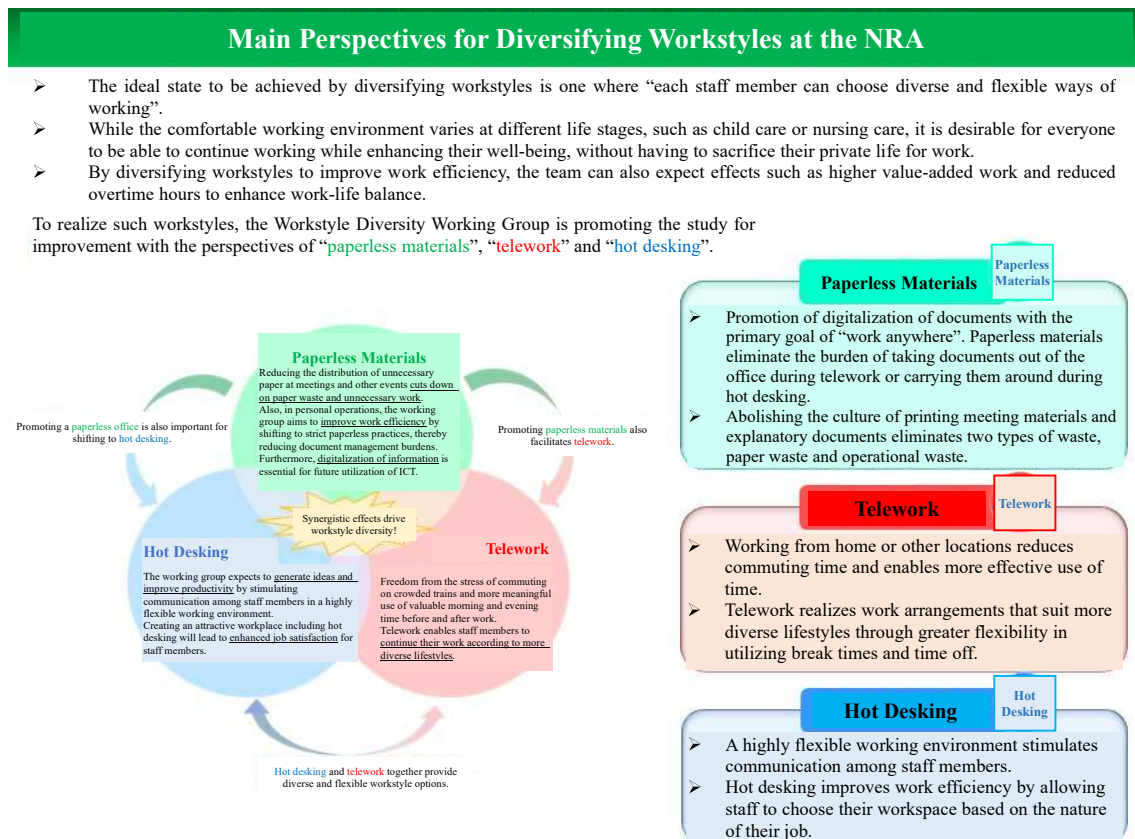
(2) List of Items Requiring Improvement Confirmed in FY 2024

	Date of Confirmation	Items Requiring Improvement
1	April 16, 2024	Corrective guidance from the Tokyo Labor Bureau based on the Worker Dispatching Act
2	September 6, 2024	Incident involving the disposal of an access card by a former staff member
3	October 8, 2024	Storage of staff salary information, including personal information, in a shared folder accessible to all NRA staff
4	October 24, 2024	Incorrect entries in the review report for permission for change in nuclear fuel material usage
5	October 24, 2024	Lack of understanding of budget procedures concerning designated organizations under laws and regulations
6	October 25, 2024	Drafting and issuance of documents requiring enforcement, without undergoing approval procedures
7	October 25, 2024	Failure to redact and inappropriate masking of non-disclosed information in materials released on the NRA website (accounting provisions)
8	October 25, 2024	Deficiency in materials submitted to the Minister of Internal Affairs and Communications and materials posted on the NRA website
9	November 1, 2024	Conveying incorrect views to operators regarding the content of application for approval of design and construction plans
10	January 31, 2025	Improper management of confidential documents

11	February 17, 2025	Clerical errors in approval documents, etc. in the Regulations for the Revision of the Regulation on Commercial Power Reactors, etc.
12	February 21, 2025	Improper disposal of security cards for SE Office access
	In the processing of	Incorrect collection of fees concerning nuclear regulatory inspections

14. Status of Diversifying Workstyles

At the Workstyle Diversity Team established in FY 2023, the NRA has been working to create environments where staff can work comfortably. This involves broad internal recruitment of staff with bold ideas, unconstrained by conventional initiatives. The team is promoting cross-organizational initiatives for diversifying workstyles as shown in the figures below, with the main perspectives of establishing comfortable working environments, achieving efficient task execution and maintaining/building open workplaces.

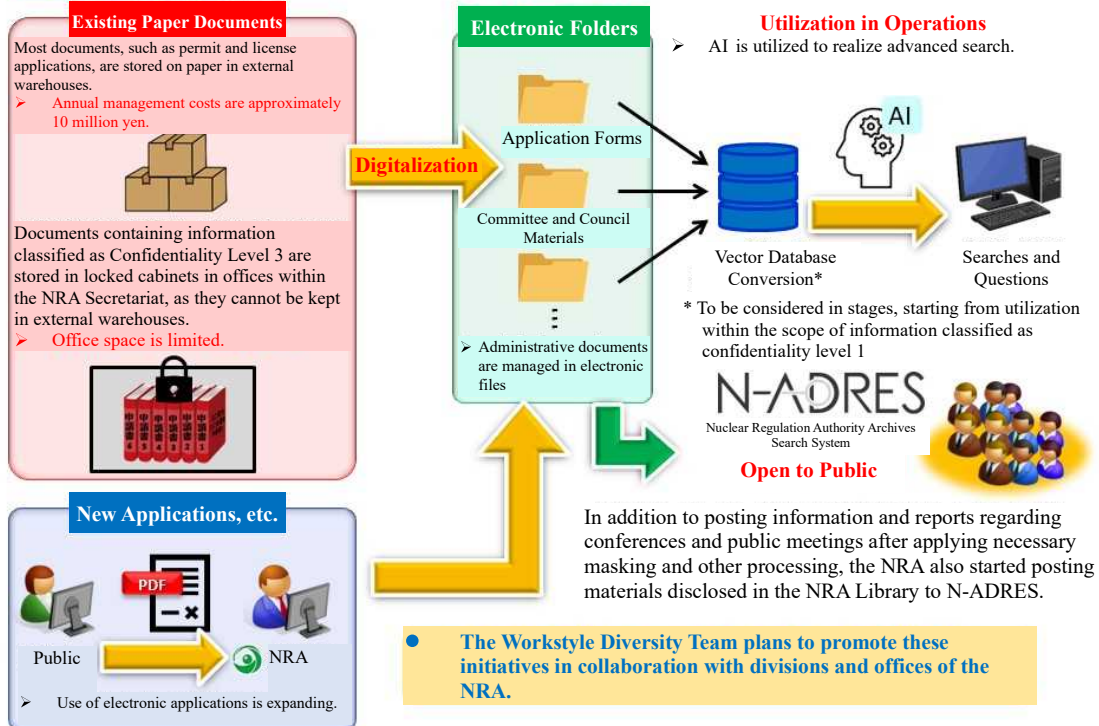


Digitization of Documents (Promoting Paperless Materials) and Data Utilization

Paperless Materials

Challenge

- There is an urgent need to accelerate the digitalization of administrative documents currently stored on paper.



Facilitation of Telework

Telework

Paperless Materials

Challenge

- To introduce telework as a workstyle and facilitate smooth operations, including those attending the NRA Secretariat, all staff must deepen their understanding of telework.
- The NRA has implemented a plan to enable all staff of the NRA Secretariat to periodically engage in telework, aiming to:
 - Deepen each staff member's understanding of telework.
 - Broadly extract barriers and challenges concerning telework implementation and explore solutions.
 - Share ingenuity and initiatives within the NRA Secretariat to implement comfortable and effective telework.

⇒ During the implementation period (July to December 2024), approximately 94% (952 persons) of targeted staff within the NRA Secretariat engaged in telework.



○ Fostering Understanding of Telework through Planning

- Understanding of telework has been deepened among managers, making it easier to apply for telework.

○ Improvements in the Working Environment Based on Extracted Challenges

- Means of communication in and out of the NRA Secretariat, such as forwarding settings for extension calls, are reorganized and made known throughout the NRA Secretariat.
- On-line meeting environments (microphones, loudspeakers, etc.) in meeting rooms and executive offices were reorganized.

○ Rediscovery and Re-recognition of Telework Benefits

- More flexible operations such as flexible hours and early/late starts are realized since commuting time is unnecessary
- Effects of being able to concentrate on training sessions and online meetings with external parties are felt.
- Planned execution of operations in anticipation of telework has also improved overall work efficiency.



Introduction of Hot Desking

Hot Desking
Paperless Materials

- With the relocation to the new NRA building in FY 2027 in mind, the NRA is reviewing workplace usage with the aim of saving office space, improving work efficiency and promoting active communication.
- As part of this effort, hot desking is being introduced on a trial basis in some divisions and offices.



Specifically, a wide variety of focus spaces and meeting sofa booths are being installed to create an environment where individual staff members can work in a place suited to their assigned operations or work (ABW).



As of December 2024, hot desking has been introduced to total of four divisions and offices, with a rule requiring staff members to sit at different seats every day, instead of having fixed seats. Focus spaces and height-adjustable desks have also been introduced on a trial basis.

- To effectively implement initiatives such as introducing hot desking, the NRA visits and analyzes private companies and other organizations that have already implemented the initiatives.

ABW : Activity Based Working

Workstyles that allow staff to choose the most suitable location, both inside and outside the workplace, based on the content and purpose of their jobs

Effective Utilization of Communication Tools

Telework
Hot Desking
Paperless Materials

- The NRA is committed to realizing three pillars of communication by building a system that enables communication, regardless of working in an office within the NRA Secretariat or working from home.



Groupware

Communication and Material Sharing within the NRA Secretariat

- Standardizing material sharing and communication methods will address the concentration of notifications on managers and promote the formation of smarter means of communication.



Chat Application

Administrative Communication and Calls within the NRA Secretariat

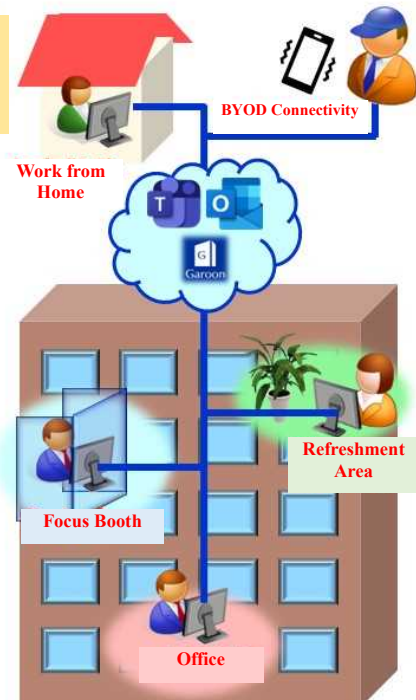
- Replacing extension calls with application-based calls enables communication regardless of whether staff members are attending the NRA Secretariat or working from home.
- The ability to easily set up web conferences eliminates the need of attending the NRA Secretariat for meetings.



E-mail Application

Communication Related to Contacts from Outside the NRA Secretariat

- When communicating directly with people outside the NRA Secretariat
- When sharing external communication within the NRA Secretariat or in other situations, limiting the use of e-mails helps prevent oversights.



Environmental Improvement to Promote Active Communication

Telework
Hot
Deskling



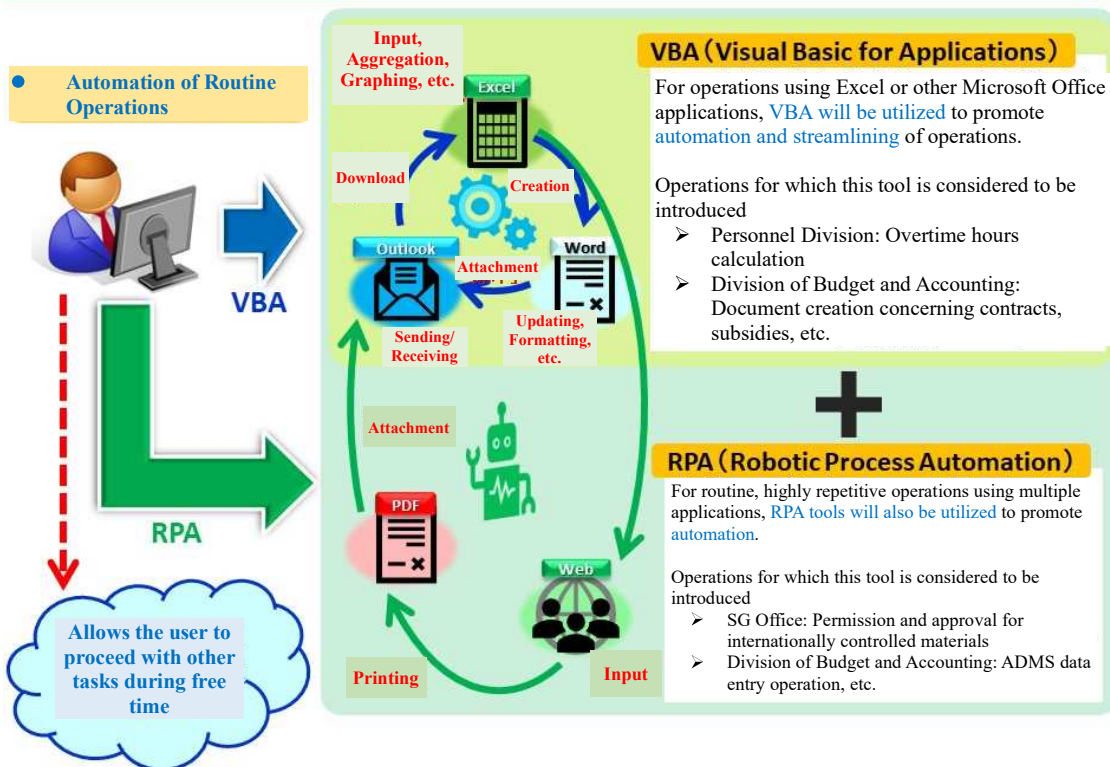
To create a place where natural communication occurs across the boundaries of divisions and positions, a “Gallery Space” equipped with various contents is being set up on a trial basis. In addition to encouraging the use of this space, coffee break events will be held periodically to create opportunities for interaction with commissioners and managers.

The NRA will improve the working environment with a focus on promoting active communication. This starts with creating an open atmosphere where staff members can easily talk to each other. Establishing a new workspace featuring a natural, cozy, and comfortable atmosphere within the office area promotes active communication among staff members.



Utilization of New ICT Tools in Operations

Paperless
Materials



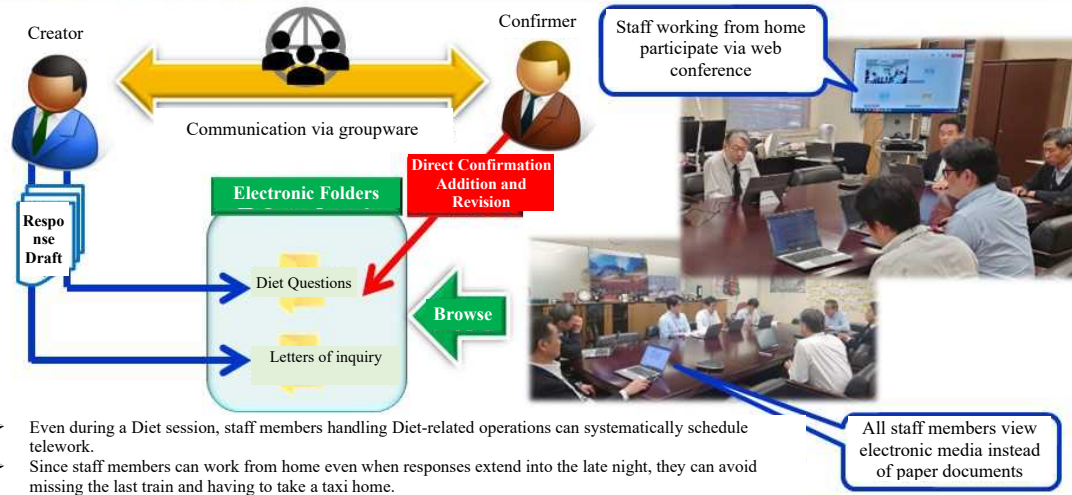
Review of Diet-related Operation Flow

Telework

Paperless Materials

- Challenge** ➤ Diet-related operations often require sudden and urgent responses and forcing staff members to attend the NRA Secretariat, which is one of the challenges in realizing diverse workstyles.

- The NRA has reviewed work processes in the NRA previously requiring in-person attendance in principle and revised the operation flow to allow response by remote work or other means.



- In order to systematically schedule telework, it is currently essential to expand the pool of staff capable of handling Diet-related operations to enable staff rotation. In the future, efforts must be made to improve the capacity for handling Diet-related operations, focusing primarily on young staff.

Reference 2. Relevant Materials related to Implementation of Various International Treaties on Nuclear Safety (related to Section 2 in Chapter 1)

The NRA is promoting cooperation with international organizations and overseas regulatory agencies through treaties and participation in the development and reviews of the IAEA's safety standards and in joint research to continuously improve nuclear regulation in Japan and contribute to nuclear safety in the international society.

1. Implementation of Various International Treaties on Nuclear Safety

(1) Convention on Nuclear Safety (Nuclear Safety Convention)

This convention applies to nuclear power plants and intends to globally achieve and maintain a high-level of nuclear safety. It is aimed to establish and maintain radiation protection at nuclear power plants, to prevent an accident with radiological consequences, and to mitigate its consequences in the event of an accident. According to the Convention, the NRA has been implementing activities (so-called “review process”) every three years such as (1) developing a national report, (2) conducting a peer review among contracting parties and (3) participating in the meeting of contracting parties (review meeting).

(The Most Recent Record of Major Activities under the Convention on Nuclear Safety)

Periods	Overview
August 2019	Submission of Japan's 8th National Report
August 2022	Submission of Japan's 9th National Report
March 20 to 31, 2023	The 8th and 9th Joint Review Meeting under the Convention on Nuclear Safety(participated by Commissioner Tanaka and others)

(2) Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

This convention applies to the safety of the management of spent fuel and radioactive waste generated from facilities including nuclear power plants, research reactors and other nuclear facilities such as reprocessing plants and rad-waste storage facilities, etc. The aim is to achieve and maintain a high level of safety worldwide in spent fuel and radioactive waste management, and to ensure radiation protection during all stages of spent fuel and radioactive waste management, to prevent an accident with radiological consequences and to mitigate its consequences in the event of an accident. According to the Convention, the NRA has been implementing activities (so-called “review process”) every three years such as (1) developing a national report, (2) conducting a peer review among contracting parties and (3) participating in the meeting of contracting parties

(review meeting).

(The Most Recent Record of Major Activities under the Joint Convention on Nuclear Waste)

Periods	Overview
October 2020	Submission of Japan's 7th National Report
June 27 to July 8, 2022	The 7th Review Meeting under the Joint Convention on Nuclear Waste (participated by Commissioner TANAKA and others)
August 2024	Submission of Japan's 8th National Report
March 17 to 28, 2025	The 8th Review Meeting under the Joint Convention on Nuclear Waste (participated by Commissioner NAGASAKI and others)

(3) Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

The Early Notification Convention is a framework for providing “information on an accident causing a transborder radiation impact” to countries that may be affected and the IAEA, whereas the Assistance Convention is a framework for providing assistance in case of a nuclear accident or a radiological emergency.

The meetings of the competent authorities of the contracting parties under the Early Notification Convention and the Assistance Convention are held every two years. The most recent meeting of competent authorities was held from June 3 to 7 in 2024, in which the NRA staff participated along with the Ministry of Foreign Affairs.

(4) The Convention on the Physical Protection of Nuclear Material and its Amendments

The Physical Protection Convention obligates the contracting countries to take protective measures for nuclear materials during their international transportation and requires them to protect nuclear materials against their illegal acquisition and use. The amendment of the Physical Protection Convention took effect in Japan on May 8, 2016 and the targets of protection based on the convention were expanded to domestic peaceful uses of nuclear materials, storage and transportation, and nuclear facilities.

The 1st meeting of the contracting parties, held (from March 28 to April 1, 2022) for the purpose of examining the validity of this amendment of the Convention, concluded that the amendment is appropriate in light of the current situation and confirmed the holding of the 2nd meeting of the contracting parties. The 2nd meeting of the contracting parties is scheduled to be held in April 2027.

2. Cooperation under International Organizations

(1) International Atomic Energy Agency (IAEA)

The IAEA is an international organization established in 1957 under the leadership of the UN with the aim of promoting peaceful uses of nuclear energy, and consists of 180 member states, as of March 2025. Its secretariat is in Vienna and the director-general is Rafael Mariano Grossi.

The IAEA's activities in the field of nuclear safety range widely, such as the development or review of its safety standards, activities relating to emergency arrangements, radiation protection and physical protection, and international cooperation for improving nuclear regulation.

The NRA has been actively participating in the activities of the Commission on Safety Standards (CSS) that review safety standards documents and its subcommittees, and the Nuclear Security Guidance Committee (NSGC) that reviews the Nuclear Security Series, which is the guideline documents for nuclear security.

Also, Councilor TANAKA of the NRA (who served as an NRA Commissioner until September 2024), joined the Advisory Group on Nuclear Security (AdSec), which is a standing advisory group of the IAEA, as a commissioner and has been contributing internationally as an international expert through the IAEA.

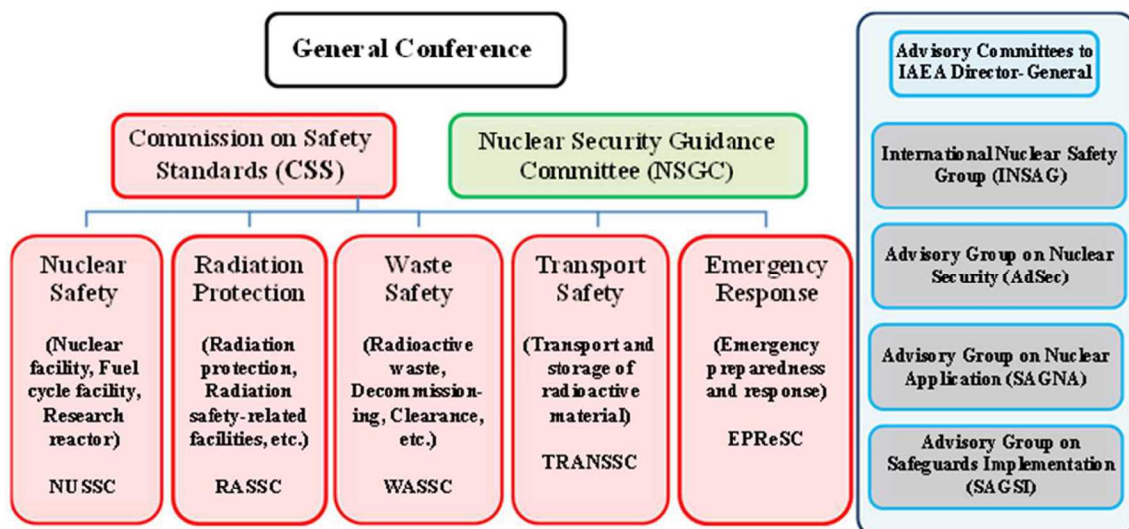


Figure iii Major IAEA Committees in which the NRA Participates

In response to requests from member states, the IAEA has been conducting peer reviews such as the Integrated Regulatory Review Service (IRRS), which comprehensively reviews nuclear regulation legal systems and regulatory organizations. The NRA invited an IRRS mission from January 10 to 22, 2016, an IRRS follow-up mission from January 14 to 21, 2020, and an IPPAS mission for reviewing the implementation status of nuclear security measures from July 22 to August 2, 2024.

In addition, through the IAEA's projects, the NRA actively participates in and contributes to efforts to improve nuclear safety worldwide, as well as collects and shares technical information and knowledge.

(IAEA's Major Cooperative Projects in which the NRA Participates)

Projects	Overview
RCF: Regulatory Cooperation Forum	The forum is designed to promote and improve cooperation and coordination among regulatory bodies and international organizations in Member States that have already established nuclear power generation and those that plan to introduce or expand it. Japan is serving as Steering Committee Member.
ANSN: Asian Nuclear Safety Network	A cooperative framework for improving the safety of nuclear facilities in the Asia region. Japan serves as the Chair of the Steering Committee.
EESS-EBP: External Event Safety Section Extra Budgetary Program	Develops detailed guides to the IAEA safety standards for external events
IGALL: International Generic Ageing Lessons Learned	Formulates technological and practical guidelines for the aging-related management of systems, structures and components important for the safety of light-water and heavy-water reactors to ensure long-term operation.
Marine Monitoring: Confidence Building and Data Quality Assurance	From FY 2014 onwards, in sea area monitoring activities joined by the IAEA at the coastal sea area of Fukushima Prefecture, the project takes samples to evaluate the method and mutual comparison of the analytical results (ILC).
Corroboration of Environmental Monitoring Related to Discharges of ALPS Treated Water	From FY 2022 onwards, the project conducts ILC to support the results of Japan's sea area monitoring as part of the safety review by the IAEA on handling ALPS-treated water.
“Additional Measure” for Independent Sampling and Analysis Related to Discharges of ALPS Treated Water)	From FY 2024 onwards, in addition to relevant staff of the IAEA, personnel from third-country analytical laboratories conduct activities to collect and analyze samples concerning the discharge of ALPS-treated water into the sea, as part of the additional monitoring under the framework of the IAEA.

(2) Organization for Economic Co-operation and Development/Nuclear Energy Agency (OECD/NEA)

Established in 1958. The OECD Nuclear Energy Agency (headed by Director General Magwood, with 34 member states as of March 2025) is headquartered in Paris and its

activities are deliberated in steering committee meetings held twice a year. Benefiting from its characteristic of sharing the latest knowledge among advanced nuclear energy countries, the OECD/NEA discusses the prevention and mitigation of a possible nuclear accident and carries out related activities (including the sharing of OECD/NEA member countries' situations regarding regulatory efforts and joint safety research based on lessons learned from the accident at the Fukushima Daiichi Nuclear Power Station).

Among the standing committees, the Committee on Nuclear Regulatory Activities (CNRA), the Committee on the Safety of Nuclear Installations (CSNI), the Committee on Radiation Protection and Public Health (CRPPH), the Radioactive Waste Management Committee (RWMC) and working groups operating under them are studying various issues concerning nuclear safety, and also the NRA is actively participating in these activities.

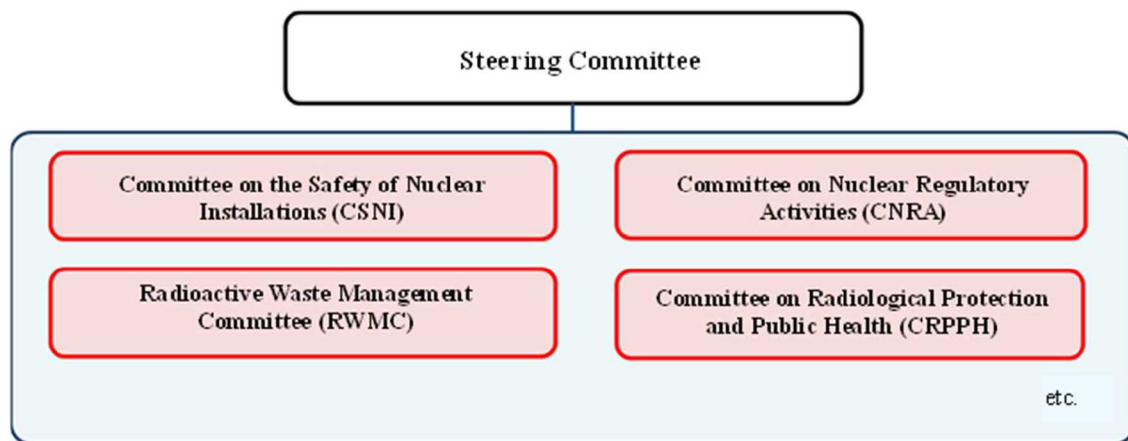


Figure iv Major OECD/NEA Committees in which the NRA Participates

In addition, the NRA has been joining various joint projects under the OECD/NEA, and contributing to the gathering of the latest technological information of advanced countries in order to make technological advancement.

(Major OECD/NEA Joint Projects in which the NRA Participates)

Projects	Overview
FACE: Fukushima Daiichi Nuclear Power Station Accident Information Collection and Evaluation	Analyze information on the accident at TEPCO's Fukushima Daiichi NPS and share data and knowledge to enhance analysis techniques relating to severe accidents in order to improve reactor safety. Additionally, share methods to establish analytical techniques on fuel debris for decommissioning.

SMILE: Studsvik Material Integrity Life Extension	Conduct various tests focusing on aging-related phenomenon with high priority that may affect long-term operation and obtain technical knowledge on aging events.

(3) Record of NRA Chairperson and Committee Members' Participation in Meetings Held by International Organizations, etc.

Dates	Meetings Held by International Organizations	Representing Commissioners
April 8 to 11, 2024	OECD/NEA/CNRA Working Group on Leadership and Safety Culture (WGLSC) (Hungary)	Commissioner BAN
April 15 to 18, 2024	IAEA Advisory Group on Nuclear Security (AdSec) (Austria)	Commissioner TANAKA
May 20 to 21, 2024	IAEA International Conference on Nuclear Security (ICONS2024) (Austria)	Commissioner TANAKA
June 18, 2024	IAEA International Workshop on Recent Advances in Seismic and Fault Displacement Hazard Assessment for Nuclear Installations (Austria)	Commissioner ISHIWATARI
July 30, 2024	Report Launch: Country-Specific Safety Culture Forum (CSSCF) Japan (Tokyo)	Commissioner BAN
September 16, 2024	IAEA General Conference (Austria)	Chairman YAMANAKA
October 21 to 25, 2024	OECD/NEA/CNRA Working Group on Leadership and Safety Culture (WGLSC) (France)	Commissioner BAN
November 15, 2024	The 1st International Nuclear Regulatory Oversight Workshop (INROW) (Tsuruga City)	Commissioner SUGIYAMA

(4) Record of Participation in International Nuclear Regulators Association (INRA)

*Since FY 2021

Periods	Main participants from the NRA
May 10, 2021	Chairman FUKETA
September 21, 2021	Chairman FUKETA
May 3 to 4, 2022	Chairman FUKETA
September 27, 2022	Chairman YAMANAKA
March 4 to 5, 2023	Chairman YAMANAKA
September 26, 2023	Chairman YAMANAKA
May 3 to 4, 2024	Chairman YAMANAKA
September 16, 2024	Chairman YAMANAKA

(5) Record of Participation in Western European Nuclear Regulators Association (WENRA)

*Since FY 2021

Periods	Main participants from the NRA
April 13 to 14, 2021	Director-General KANEKO
October 14 to 15, 2021	Director-General for Emergency Response, KANEKO
April 5 to 6, 2022	Director-General for Emergency Response, KANEKO
November 9 to 10, 2022	Deputy Secretary-General KANEKO
April 5 to 6, 2023	Deputy Secretary-General KANEKO
November 14 to 15, 2023	Deputy Secretary-General KANEKO
April 24 to 25, 2024	Deputy Secretary-General KANEKO
November 7 to 8, 2024	Deputy Secretary-General KANEKO

(6) Record of Participation in the Top Regulators Meeting on Nuclear Safety (TRM)

*Since FY 2021

Periods	Main participants from the NRA
November 30 to December 1, 2021	Commissioner BAN
December 9, 2022	Commissioner BAN

3. Bilateral Cooperation

(Organizations Having Signed a Bilateral Cooperation Document (As of the End of March 2025))

Countries	Organizations
U.S.	Nuclear Regulatory Commission (NRC) Department of Energy (DOE)
France	Nuclear Safety and Radiation Protection Authority (ASNR)*
UK	Office for Nuclear Regulation (ONR)
Russian Federation (Russia)	Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostekhnadzor)
Sweden	Swedish Radiation Safety Authority (SSM)
Germany	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)
Spain	Spanish Nuclear Safety Council (CSN)
Finland	Finnish Radiation and Nuclear Safety Authority (STUK)
Canada	Canadian Nuclear Safety Commission (CNSC)

*Regarding the arrangements for bilateral cooperation, for the time being, the memorandum of understanding with the Nuclear Safety Authority (ASN) and the Institute for Radiation Protection and Nuclear Safety (IRSN) prior to their merger remains valid.

4. Overseas External Advisors

(External advisors with whom the NRA exchanged opinions in FY 2024 (As of the Opinion Exchange on November 11, 2024))

Names	Careers
Richard Meserve	Former chairman of the U.S. Nuclear Regulatory Commission (NRC) Former Chairperson of International Nuclear Safety Advisory Group (INSAG), IAEA
Dana Drábová	Director-General of the Czech Republic (Czech) State, Office for Nuclear Safety (SUJB) Former chairperson of IAEA Commission on Safety Standards (CSS)
Philippe Jamet	Former commissioner of the Nuclear Safety Authority (ASN), France Former director of the Division of Nuclear Installation Safety, IAEA

Rumina Velshi	Former president of Canadian Nuclear Safety Commission (CNSC) Chairperson of IAEA Commission on Safety Standards (CSS)

Reference 3. Materials related to Implementation of Regulations pertaining to the Reactor Regulation Act (related to Section 1 and 2 in Chapter 2)

1. Status of Applications, Permissions or Approvals, and so on, related to Conformity of Commercial Power Reactors to New Regulatory Requirements

(1) Main Facility and Special Facility for Severe Accident Management

Applicant	Targeted Power Reactor	Application type	Application date	Review Meeting (times)	Document review (times)	On-site investigation (times)	Date of permission or approval
Hokkaido Electric Power Company	Tomari NPS (Units 1, 2)	Change in basic design	July 8, 2013	—	—	—	—
		Design and construction plan					
		Change in operational safety program					
	Tomari NPS (Units 3)	Change in basic design	July 8, 2013	19	—	2	—
		Design and construction plan					
		Change in operational safety program					
	◆Tomari NPS (Units 3)	Change in basic design	December 18, 2015	—	—	—	—
Tohoku Electric Power Company.	Onagawa NPS (Units 2)	Change in basic design	December 27, 2013	—	—	—	February 26, 2020
		Design and construction plan					December 23, 2021
		Change in operational safety program					February 15, 2023
	◆Onagawa NPS* ¹ (Units 2)	Change in basic design	January 6, 2022	4	—	1	October 4, 2023
		Design and construction plan	December 14, 2023 September 26, 2024				March 28, 2025 —
	Higashidori NPS (Units 1)	Change in basic design	June 10, 2014	5	—	—	—
		Design and construction plan					
		Change in operational safety program					
Tokyo Electric Power Company Holdings, Inc.	Kashiwazaki Kariwa NPS (Units 6, 7)	Change in basic design	September 27, 2013	3	—	—	December 27, 2017
		Design and construction plan					December 14, 2020 (Units 7) September 2, 2024 (Units 6)

Applica nt	Targeted Power Reactor	Application type	Application date	Review Meeting (times)	Docume nt review (times)	On-site investiga tion (times)	Date of permission or approval
	◆Kashiwazaki - Kariwa NPS* ¹ (Units 6, 7)	Change in operational safety program	September 27, 2013 (Units 7) August 29, 2024 (Units 6)	7	—	—	October 30, 2020 (Units 7) February 28, 2025 (Units 6)
		Change in basic design	December 15, 2014 March 14, 2023* ²				August 17, 2022 October 25, 2023
		Design and construction plan	January 30, 2023 (Units 7) July 6, 2023 (Units 7) January 16, 2024 (Units 7) November 28, 2024 (Units 7) February 27, 2025 (Units 6)				—
Chubu Electric Power Compan y.	Hamaoka NPS (Units 3)	Change in basic design	June 16, 2015	10	—	1	—
	Hamaoka NPS (Units 4)	Change in basic design ----- Design and construction plan ----- Change in operational safety program	February 14, 2014 January 26, 2015* ³	10	—	1	—
Hokurik u Electric Power Compan y	Shika NPS (Units 2)	Change in basic design ----- Design and construction plan ----- Change in operational safety program	August 12, 2014	6	—	—	—
Kansai Electric Power Compan y.	Ohi NPS (Units 3, 4)	Change in basic design ----- Design and construction plan ----- Change in operational safety program	July 8, 2013	—	—	—	May 24, 2017 ----- August 25, 2017 ----- September 1, 2017
		Change in basic design ----- Design and construction plan ----- Operational safety program					February 26, 2020 ----- December 22, 2020 ----- August 24, 2021 ----- March 24, 2022
		Change in basic design ----- Design and construction plan ----- Operational safety program	March 8, 2019 ----- March 6, 2020 ----- August 26, 2020 ----- September 17, 2021	—	—	—	February 26, 2020 ----- December 22, 2020 ----- August 24, 2021 ----- March 24, 2022
	◆Ohi NPS* ¹ (Units 3, 4)	Change in basic design ----- Design and construction plan ----- Operational safety program	March 8, 2019 ----- March 6, 2020 ----- August 26, 2020 ----- September 17, 2021	—	—	—	February 26, 2020 ----- December 22, 2020 ----- August 24, 2021 ----- March 24, 2022

Applica nt	Targeted Power Reactor	Application type	Application date	Review Meeting (times)	Docume nt review (times)	On-site investiga tion (times)	Date of permission or approval
	Takahama PS (Units 3, 4)	Change in basic design	July 8, 2013	—	—	—	February 12, 2015
		Design and construction plan					August 4, 2015 (Units 3) October 9, 2015 (Units 4)
		Change in operational safety program					October 9, 2015
	◆Takahama PS (Units 3, 4)	Change in basic design	December 25, 2014	—	—	—	September 21, 2016
		Design and construction plan	April 26, 2017				August 7, 2019
		Change in operational safety program	April 17, 2020				October 7, 2020
	Takahama PS (Units 1, 2)	Change in basic design	March 17, 2015	—	—	—	April 20, 2016
		Design and construction plan	July 3, 2015				June 10, 2016
		Change in operational safety program	July 31, 2019				February 15, 2021
	◆Takahama PS*1 (Units 1, 2)	Change in basic design	December 22, 2016	—	—	—	March 7, 2018
		Design and construction plan	March 8, 2018 November 16, 2018 March 15, 2019 May 31, 2019				April 25, 2019 September 13, 2019 October 24, 2019 February 20, 2020
		Change in operational safety program	May 23, 2022				January 13, 2023
	Mihama NPS (Units 3)	Change in basic design	March 17, 2015	—	—	—	October 5, 2016
		Design and construction plan	November 26, 2015				October 26, 2016
		Change in operational safety program	March 17, 2015				February 27, 2020
	◆Mihama NPS (Units 3)	Change in basic design	April 20, 2018	—	—	—	July 8, 2020
		Design and construction plan	July 20, 2020				April 6, 2021
		Operational safety program	September 17, 2021				March 25, 2022
Chugoku Electric Power	Shimane NPS (Units 2)	Change in basic design	December 25, 2013	1	—	—	September 15, 2021
		Design and construction plan					August 30, 2023

Applicant	Targeted Power Reactor	Application type	Application date	Review Meeting (times)	Document review (times)	On-site investigation (times)	Date of permission or approval
Company.		Change in operational safety program					May 30, 2024
	◆Shimane NPS (Units, 2)* ¹	Change in basic design	July 4, 2016	1	—	—	October 23, 2024
		Design and construction plan	January 31, 2025				—
	Shimane NPS (Units 3)	Change in basic design	August 10, 2018	5	—	—	—
Shikoku Electric Power Company.	Ikata NPS (Units 3)	Change in basic design	July 8, 2013	—	—	—	July 15, 2015
		Design and construction plan					March 23, 2016
		Change in operational safety program					April 19, 2016
	◆Ikata NPS* ¹ (Units 3)	Change in basic design	January 14, 2016	—	—	—	October 4, 2017
		Design and construction plan	December 7, 2017 March 16, 2018 May 11, 2018 August 13, 2018 July 11, 2019				March 25, 2019 December 24, 2019 March 27, 2020 October 10, 2019 March 27, 2020
		Change in operational safety program	November 27, 2020				April 28, 2021
Kyushu Electric Power Company.	Genkai NPS (Units 3, 4)	Change in basic design	July 12, 2013	—	—	—	January 18, 2017
		Design and construction plan					August 25, 2017 (Units 3) September 14, 2017 (Units 4)
		Change in operational safety program					September 14, 2017
	◆Genkai NPS* ¹ (Units 3, 4)	Change in basic design	December 20, 2017	—	—	—	April 3, 2019
		Design and construction plan (Units 3)	May 16, 2019 September 19, 2019 January 17, 2020				November 28, 2019 March 4, 2020 August 26, 2020
		Design and construction plan (Units 4)	June 18, 2019 September 19, 2019 January 17, 2020				November 28, 2019 March 4, 2020 August 26, 2020
		Operational safety program	August 10, 2021				March 24, 2022

Applicant	Targeted Power Reactor	Application type	Application date	Review Meeting (times)	Document review (times)	On-site investigation (times)	Date of permission or approval
	Sendai NPS (Units 1, 2)	Change in basic design	July 8, 2013	—	—	—	September 10, 2014
		Design and construction plan					March 18, 2015 (Units 1) May 22, 2015 (Units 2)
		Change in operational safety program					May 27, 2015
	◆ Sendai NPS* ¹ (Units 1, 2)	Change in basic design	December 17, 2015	—	—	—	April 5, 2017
		Design and construction plan (Units 1)	May 24, 2017 August 8, 2017 March 9, 2018				May 15, 2018 July 26, 2018 February 18, 2019
		Design and construction plan (Units 2)	July 10, 2017 August 8, 2017 March 9, 2018				August 10, 2018 August 31, 2018 April 12, 2019
		Change in operational safety program	August 2, 2019				March 25, 2020
Japan Atomic Power Company	Tokai Daini NPS	Change in basic design	May 20, 2014	—	—	—	September 26, 2018
		Design and construction plan					October 18, 2018
		Change in operational safety program					—
	◆ Tokai Daini NPS* ¹	Change in basic design	September 24, 2019	5	—	1	December 22, 2021
		Design and construction plan	February 28, 2022 April 28, 2022 October 19, 2022 May 31, 2023 August 2, 2024				November 16, 2022 May 31, 2023 October 2, 2023 December 5, 2024
		Change in operational safety program* ⁴	May 20, 2014				—
	Tsuruga NPS (Units 2)	Change of installation* ⁵ Change in operational safety program	— November 5, 2015	3	—	1	—
Electric Power Development Co., Ltd	Oma NPS* ⁶	Change in basic design Design and construction plan	December 16, 2014	9	—	—	—

- Several applications may be reviewed at one session of the review meeting
- The number of review meetings mainly attended by Commissioners of the NRA is mentioned as a rule.
- The number of on-site investigations implemented by the Commissioners of the NRA is mentioned, and those implemented only by the staff of the secretariat of the NRA is excluded.

- The numbers of review meetings and on-site investigations represent the number held in FY 2024.

◆: Application for Special Facility for Severe Accident Management

- *1: The design and construction plan is divided into several phases and separate applications are submitted
- *2: On March 14, 2023, an application for permission for change of installation was submitted to partially change the structure of special facility for severe accident management.
- *3: The application for permission for change of reactor installation submitted on February 14, 2014 was withdrawn and submitted again in order to add a spent fuel dry storage facility on January 26, 2015.
- *4: The application for approval of change in operational safety program (main plant facility) submitted on May 20, 2014 was revised on June 23, 2023 to reflect the content of the permission for change of installation concerning the installation of special facility for severe accident management.
- *5: On November 13, 2024, the NRA determined not to permit the application for permission for change of reactor installation of nuclear reactor applied on November 5, 2015.
- *6: This application includes contents regarding Special Facility for Severe Accident Management.

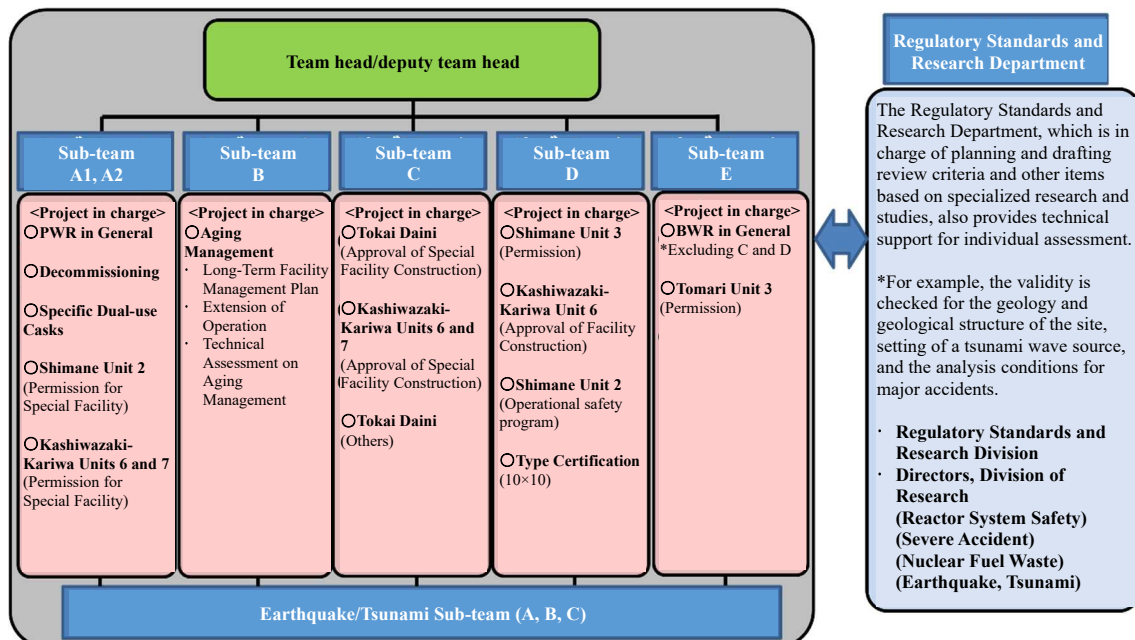
(2) Others

(i) Application for Permission for Change of Installation Concerning Installation of Spent Fuel Dry Storage Facility at Nuclear Power Plant Site

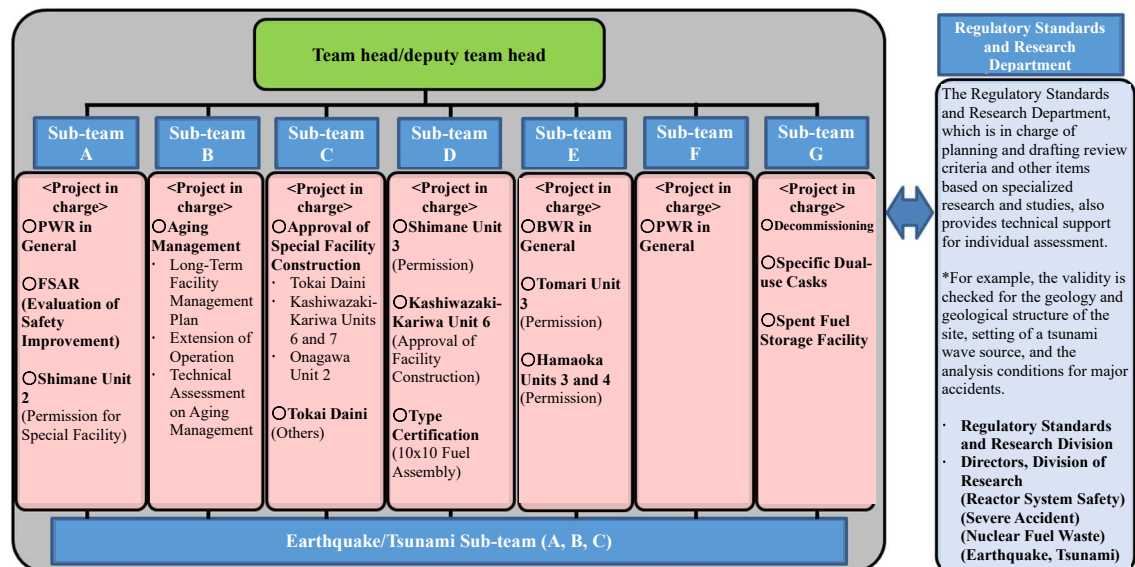
Applicant	Targeted Power Reactor	Application Date	Date of Permission
Chubu Electric Power Company.	Hamaoka NPS (Unit 4)	January 26, 2015	—
Tohoku Electric Power Company.	Onagawa NPS (Unit 2)	February 28, 2024	—
Kansai Electric Power Company.	Takahama PS (Units 1, 2, 3, 4)	March 15, 2024	—
	Ohi NPS (Unit 3, 4)	July 12, 2024	—
	Mihama NPS (Unit 3)	July 12, 2024	—

2. Review System of Conformity of Nuclear Power Stations to New Regulatory Requirements

- System on and before August 31, 2024



- System on and after September 1, 2024



3. Status of Inspection of Major Nuclear Facilities

(1) Inspection Findings in the 4th Quarter of FY 2023

(Nuclear Facility Safety and Radiation Safety)

	Subject	Overview	Significance and Severity Levels
The 4th Quarter	1	Unit 7 of Kashiwazaki-Kariwa NPS: Failure to secure access route due to inadequate impact access route assessment for construction work On December 27, 2023, at Unit 7 of Kashiwazaki-Kariwa NPS that was offline, safety inspectors conducted plant walkdowns to check the scenario for drills concerning severe accidents that must be conducted before the start of application of the operational safety program for the Facilities for Severe Accident Management, etc. (hereinafter referred to as “SA Facilities”). During the walkdown of the access route from the location of the portable SA Facilities to its connection point, they observed that construction work was underway on the access route. Upon confirmation with the contractor, it was found that an assessment of impact on the access routes by the construction work had not been conducted. Subsequently, the operator conducted the impact assessment and confirmed that part of the access route could not be secured, as it could not be ruled out that one of the temporary structures associated with the construction work might impact the access route surrounding the structure.	Green No SLV evaluation
	2	Tokai Daini PS: Non-implementation of technical assessment concerning the isolation distance of construction equipment from safety system facilities On January 25, 2024, at Tokai Daini PS that was shutdown, nuclear operational inspector observed during plant inspections that temporary scaffolding and temporary stored materials for construction work had been placed near the central control room emergency ventilation and air-conditioning facility and the reactor building air intake isolation valve, which are safety system facilities, in a manner that did not satisfy the isolation distance required to maintain functionality as specified in internal rules. They also found that the operator had placed construction equipment in a manner that did not satisfy the isolation distance and conducted work concerning irradiated fuel on the same day, without conducting a technical impact assessment on the maintenance of safety system equipment functionality during earthquakes.	Green SL IV

	Subject	Overview	Significance and Severity Levels
3	Unit 2 of Tsuruga PS: Shutdown of reactor auxiliary cooling seawater system due to improper work	On February 26, 2024, at Unit 2 of Tsuruga PS that was shutdown, a plant worker was preparing to inspect the reactor auxiliary cooling seawater piping and accidentally loosened bolts on the manhole of the seawater piping on the A-train side that was in use, instead of the B-train side that was the intended inspection target, resulting in seawater leakage from the flange part of that manhole. To inspect the flange part, the operator attempted to shut down the A-train side of the reactor auxiliary cooling seawater system. Since the B-train side was already offline, the reactor auxiliary cooling seawater system was shut down. Consequently, since all diesel generators were excluded from standby, the operator determined the deviation from limiting condition for operation. The operator also shut down the reactor auxiliary cooling system, air-conditioning chiller, control air system, spent fuel pit cooling system, and ventilation and air-conditioning cooling system, all of which use the reactor auxiliary cooling seawater system for cooling.	Green SL IV
4	Unit 3 of Mihama PS: Improper implementation of start-up test for emergency circulation fan in central control room	On November 22, 2023, start-up testing for an emergency circulation fan in the central control room for Unit 3 of Mihama NPS, nuclear inspectors checked the operation status of the “A-control building 1st outdoor air intake damper” on the central control room monitoring/operation display (hereinafter referred to as “VDU”) and found that the status did not change from “Adjustment Open” to “Closed”. Accordingly, operating personnel conducted an on-site inspection and found that the damper's position indicator was set to “Closed”. The operating personnel then performed a tactile inspection of the facilities related to the damper's operation (the position switch box and its drive unit). Since the VDU display showed “Closed”, the operator judged the result as “Good” and concluded the test. In terms of the test procedure, however, it was inappropriate they continued the test without interrupting it when the VDU display did not show “Closed”.	Green SL IV

	Subject	Overview	Significance and Severity Levels
5	Units 3 and 4 of Takahama PS: Improper installation of fire detectors in emergency diesel generator room, etc. due to inadequate corrective action	The operator had been conducting improvement actions for the inspection findings of the 1st quarter of FY 2021 “Improper installation of the smoke detectors in the passage to the boric acid pump room at Takahama P S Unit 3” and “Improper installation of the smoke detectors in the charging/high-pressure safety injection pump piping room at Takahama PS Unit 4”. However, in response to the observation “Improper installation of fire detectors” made during the pre-operation inspection of Unit 1 at Takahama PS in May 2023, the operator re-examined the fire detectors installed at Units 3 and 4 and newly found that there were a total of 159 fire detectors that did not satisfy the requirements of “the written explanation regarding fire protection of nuclear power reactor facilities (Reference 7 “Application for approval of the construction plan for Units 3 and 4 of Takahama PS”).”	Green SL IV
6	Unit 4 of Takahama PS: Fluctuations in spent fuel pit water level due to improper process management	On January 11, 2024, at Unit 4 of Takahama PS undergoing a periodic inspection, plant workers were inserting a stop log (closing plate) between the spent fuel A-pit (hereinafter referred to as “pit”) and the fuel transfer canal (hereinafter “canal”) as part of preparatory work for draining the canal, which was necessary in conjunction with replacing the GO switch (limit switch) of the fuel transfer device. Normally, A-pit is cooled by the A-train (A-pit pump and A-cooler), and B-pit is cooled by the B-train (B-pit pump and B-cooler). However, since the B-train was unavailable due to inspection of the reactor auxiliary cooling system, both pits were being cooled using a system where water was taken from B-pit and supplied to A-pit via A-train. This system configuration was not designed to require stop log insertion. However, because of the insufficient confirmation from the operator to the work supervisor (contractor), a discrepancy arose in their understanding of the day's work, where the operator believed it was preparation for stop log insertion and the work supervisor believed it was stop log insertion itself. Consequently, the stop log was	Green SL IV

	Subject	Overview	Significance and Severity Levels
		inserted. Inserting the stop log separated A-pit and B-pit and eliminated inflow from A-pit to B-pit. This caused the water level in A-pit to rise and the water level in B-pit to drop, triggering the high water level warning for A-pit and the low water level warning for B-pit.	
7	Unit 1 of Takahama PS: Steam leakage from inlet pipe of feedwater booster pump due to improper maintenance	On January 21, 2024, at Unit 1 of Takahama PS in operation, plant workers observed a slight steam leak from a section of the inlet piping of the B-feedwater booster pump (hereinafter referred to as “pump”) located on the 1st floor of the turbine building during a patrol inspection. Therefore, the plant workers started C-pump on standby and stopped B-pump. Subsequently, they confirmed the larger amount of drain from the gland part of A-pump in operation than normal and decided to stop the pump for inspection. As a result, there was only one pump in operation, so the on-duty department manager reduced the electrical output to 40%. It was presumed that the cause of this steam leakage was insufficient confirmation of the contact condition between the top of the vent pipe and the upper support beam during the restoration work on the support beam after vibration measurement of the vent pipe, which was conducted before the start of the 21st periodic inspection (2002) and during subsequent routine inspections.	Green SL IV
8	Unit 3 of Ikata PS: inadequate measures for fire separation of cables due to inappropriate design management and improper response to nuclear regulatory inspection	From October 23 to 26 and November 27 to December 1 of 2023, at Unit 3 of Ikata PS, when the nuclear inspectors conducted on-site walkdown, it was found that there are some positions for which the measures for fire separation were not constructed to the conduit to store the cables subject to fire protection and viable access paths had not been secured to shut down the nuclear reactor manually. Additionally, in the nuclear regulatory inspection implemented in January of 2023, it was found that Shikoku Electric Power Company. prepared an erroneous record to explain conformity which was different from the facts and presented it to the	Green SL IV

	Subject	Overview	Significance and Severity Levels
		nuclear inspectors and failed to provide accurate information to the nuclear inspectors. They didn't conduct a detailed examination even after the similar inspection findings concerning the measures for fire protection at other nuclear power plants were indicated.	
	9	Unit 2 of Sendai NPS: Potential temporary loss of containment vessel's containment function due to failure to follow restoration procedures after emergency airlock leakage rate test On December 14, 2023, at Unit 2 of Sendai NPS in operation, nuclear operational inspectors were present at the leakage rate test of the emergency airlock (hereinafter "airlock"). During restoration after the test, contractor workers attempted to open the inner door (on the reactor containment vessel side) when the outer door (on the fuel handling building side) was still open. The nuclear operational inspectors confirmed that the operation was interrupted, through the operator's work observer, just before trainees from the operator, not part of the restoration work system, noticed that both doors would be opened simultaneously soon. Although the work procedure document specifies that the inner door must be opened only after the outer door has been restored and closed in order to maintain the containment vessel's containment function, the contractor workers did not follow this instruction this time and proceeded to the point of operating the handle to open the inner door.	Green SL IV
	10	Unit 1 of Sendai NPS: Partial loss of fire wall due to failure to implement compensatory measures when equipment access hatch between fire sections was open On August 31, 2023, at Unit 1 of Sendai NPS in operation, nuclear inspectors conducted an on-site walkdown and found that the access hatch cover (approx. 3.4 m ²) on the floor of the reactor auxiliary cooling water pump auxiliary cooling water cooler room had been removed, failing to maintain the separation of the fire section from the auxiliary feedwater pump motor valve room downstairs by the 3-hour fire-resistant wall. The nuclear inspectors also confirmed that the fire watch officer who constantly monitors the area around the hatch cover (hereinafter referred to as "the fire watch officer") was absent. Furthermore, on the following day, September 1, they confirmed that the hatch cover	Green SL IV

	Subject	Overview	Significance and Severity Levels
		remained removed and the fire watch officer was absent on the previous day.	
11	Unit 3 of Mihama PS: Failure to maintain equipment necessary to sustain accident response for 7 days due to insufficient consideration of the running fuel, etc. for the Facility for Severe Accident Management, etc.	From October 12 to 13, 2023, at Unit 3 of Mihama PS, nuclear inspectors found during the “Confirmation of Feasibility for Effectiveness Assessment through On-site Training” the operator had not sufficiently considered the required amount and storage method of fuel for the portable oil pumps, which are equipment for SA Facility, to sustain accident response for 7 days. Consequently, the nuclear inspectors confirmed that the operator had not systematically stored fuel and failed to maintain the fueling procedures and diesel fuel cans specified in Attachment 10 of the Application for Permission for Change of Reactor Installation. They also confirmed that systematic fuel storage had not systematically stored the running fuel for SA Facility.	Green SL IV
12	Units 1, 2, 3, and 4 of Takahama PS: Failure to maintain materials and equipment necessary to sustain accident response for 7 days due to insufficient consideration of the running fuel, etc. for the Facility for Severe Accident	From January 10 to 11, 2024, at Takahama PS, nuclear inspectors checked the status of the Takahama PS for the ongoing inspection item from the 3rd quarter of FY 2023, “Failure to maintain refueling procedures, etc. necessary to operate portable oil pumps for 7 days at Unit 3 of Mihama PS” during the “Confirmation of Feasibility for Effectiveness Assessment through On-site Training” concerning response to severe accidents, etc. Consequently, the nuclear inspectors confirmed that the operator had not maintained oil pumps, etc., necessary for refueling due to insufficient consideration of the amount and storage method of running fuel, which is part of the equipment for SA Facility, necessary to sustain accident response for 7 days.	Green SL IV

		Subject	Overview	Significance and Severity Levels
		Management, etc.		
	13	Units 1 and 2 of Sendai NPS: Failure to maintain the equipment necessary to sustain accident response for 7 days due to insufficient review of fuel, etc. for Facility for Severe Accident Management, etc.	On January 16, 2024, concerning the preventive measures taken by operators, the operator checked the status of Sendai NPS for the ongoing inspection item from the 3rd quarter of FY 2023, “Failure to maintain refueling procedures, etc., necessary to operate portable oil pumps for 7 days at Unit 3 of Mihama NPS” and found that running fuel, which is equipment for the SA Facility, has not been systematically stored due to insufficient consideration of the amount and storage method necessary to sustain accident response for 7 days. The nuclear inspectors confirmed the content checked by the operator during the team inspection of training for response to severe accidents.	Green SL IV

(Physical Protection of Nuclear Material)

		Subject	Overview	Significance and Severity Levels
The 4th	None			

(2) Results of FY 2023

(Routine Inspection (Power Reactor))

No.	Guide No.	Inspection guide name	Sendai	Genkai	Ikata	Takahama	Ohi	Mihama

			Units 1,2: In operation	Units 1,2: Decommissioning A Units 3,4: In operation	Unit 1: Decommissioning B Unit 2: Decommissioning A Units 3: In operation	Units 1,2: Long-term shutdown Units 3,4: In operation	Units 1,2: Decommissioning A Units 3,4: In operation	Units 1,2: Decommissioning A Units 3: In operation
1	BM0020	Oversight of operator's periodic inspection	14	15	17	17	20	8
2	BM1040	Heat sink performance	2	3	3	3	3	3
3	BM0060	Maintenance effectiveness assessments	5	6	5	4	5	5
4	BM0100	Design control	8	6	6	6	7	5
5	BM0110	Work control	10	11	8	12	8	4
6	BO0010	Surveillance tasting	20	22	22	25	41	22
7	BO1020	System configuration of equipment	18	22	19	22	23	20
8	BO1030	Reactor start-up and shutdown	2	1	1	3	1	1
9	BO1040	Operability determination and functionality assessments	21	25	23	25	25	19
10	BO0060	Nuclear fuel control (Transportation and storage)	3	4	2	4	2	3
11	BO1070	Capability of operating personnel	5	5	10	5	12	5
12	BE0010	Protection against natural disaster	4	5	5	4	5	4
13	BE0020	Fire protection	13	13	13	13	14	12
14	BE0030	Internal flood protection	4	4	3	3	4	3
15	BE0040	Maintaining of emergency response organization	2	1	1	1	1	1
16	BE0050	Emergency preparedness and maintenance	6	2	2	3	7	1
17	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	12	11	8	11	15	11
18	BE0070	Evaluation of training for personnel to respond to severe accidents, etc.	1	0	0	0	0	0
19	BE0090	Seismic protection	4	4	4	4	4	4
20	BE0100	Tsunami protection	4	5	4	4	4	4
21	BR0010	Radiation exposure control	6	6	6	11	6	6
22	BR0050	Radioactive gas/liquid waste management	0	0	0	0	0	0
23	BR0070	Radioactive solid waste management	3	3	4	6	3	3
24	BR0090	Radiation monitoring equipment	1	0	0	0	0	0
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1
26		Operation of Quality Management System (Semiannual)	2	2	2	0	7	2
27	BQ0040	Performance Indicator Verification	1	1	2	1	2	1
28	BQ0050	Initial response to occurrence of an event	0	0	2	7	1	3
Total			170	178	173	195	221	151

Unit: Number of samples

[Explanatory notes]

- (1) "Operation" : In service in compliance with new completing response to new regulatory requirements.
- (2) "Long-term shutdown" : Long-term shutdown, in preparation in compliance with new regulatory requirements.
- (3) "Decommissioning A": Decommissioning approved with spent fuel SFP. The same inspection is performed as in the long-term shutdown.
- (4) "Decommissioning B": Decommissioning approved with no spent fuel SFP.
- (5) "Decommissioning review" : Under review for decommissioning. The same inspection is performed as in the long-term shutdown.

- (6) “Decommissioning planned : Planned to apply for decommissioning. The same inspection is performed as in the long-term shutdown.
- (7) “Construction A”: In the construction phase with no new fuel delivered.
- (8) “Construction B”: In the construction phase with new fuel delivered. The same inspection is performed as in the long-term shutdown.

No.	Guide No.	Inspection guide name	Tomari	Higashidori	Onagawa	Kashiwazaki-Kariwa	Fukushima Daini	Tokai
			Units 1 to 3: Long-term shutdown	Unit 1: Long-term shutdown	Unit 1: Decommissioning A Units 2, 3: Long-term shutdown	Units 1 to 7: Long-term shutdown	Units 1 to 4: Decommissioning A	Unit 1: Decommissioning B Unit 2: Long-term shutdown
1	BM0020	Oversight of operator's periodic inspection	0	0	4	10	4	2
2	BM1040	Heat sink performance	1	1	1	2	1	1
3	BM0060	Maintenance effectiveness assessments	1	1	1	2	1	1
4	BM0100	Design control	3	2	2	2	0	2
5	BM0110	Work control	7	5	8	24	4	5
6	BO0010	Surveillance tasting	5	4	7	6	6	3
7	BO1020	System configuration of equipment	4	3	5	8	5	4
8	BO1030	Reactor start-up and shutdown	0	0	0	0	0	0
9	BO1040	Operability determination and functionality assessments	4	3	6	8	5	4
10	BO0060	Nuclear fuel control (Transportation and storage)	1	1	1	5	1	1
11	BO1070	Capability of operating personnel	2	1	2	1	1	2
12	BE0010	Protection against natural disaster	2	2	2	4	2	2
13	BE0020	Fire protection	8	7	8	11	7	7
14	BE0030	Internal flood protection	1	1	0	4	2	1
15	BE0040	Maintaining of emergency response organization	2	1	1	1	1	1
16	BE0050	Emergency preparedness and maintenance	3	1	2	1	1	2
17	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	0	0	0	0	0	0
18	BE0070	Evaluation of training for personnel to respond to severe accidents, etc.	0	0	0	0	0	0
19	BE0090	Seismic protection	1	1	1	2	1	1
20	BE0100	Tsunami protection	1	1	1	2	1	1
21	BR0010	Radiation exposure control	3	3	4	6	3	4
22	BR0050	Radioactive gas/liquid waste management	1	0	0	0	0	0
23	BR0070	Radioactive solid waste management	3	3	3	3	3	3
24	BR0090	Radiation monitoring equipment	0	0	0	0	0	0
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1
26		Operation of Quality Management System (Semiannual)	2	2	2	2	2	2
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	2
28	BQ0050	Initial response to occurrence of an event	0	0	2	1	0	0
Total			56	45	65	107	53	52

Unit: Number of samples

[Explanatory notes]

- (1) “Operation” : In service in compliance with new completing response to new regulatory requirements.
- (2) “Long-term shutdown” : Long-term shutdown, in preparation in compliance with new regulatory requirements.
- (3) “Decommissioning A”: Decommissioning approved with spent fuel SFP. The same inspection is performed as in the long-term shutdown.
- (4) “Decommissioning B”: Decommissioning approved with no spent fuel SFP.
- (5) “Decommissioning review” : Under review for decommissioning. The same inspection is performed as in the long-term shutdown.

- (6) “Decommissioning planned : Planned to apply for decommissioning. The same inspection is performed as in the long-term shutdown.
- (7) “Construction A”: In the construction phase with no new fuel delivered.
- (8) “Construction B”: In the construction phase with new fuel delivered. The same inspection is performed as in the long-term shutdown.

No.	Guide No.	Inspection guide name	Hamaoka	Shika	Tsuruga	Shimane	Ohma	(TEPCO) Higashidori
			Units 1, 2: Decommissioning B Units 3 to 5: Long-term shutdown	Units 1, 2: Long-term shutdown	Unit 1: Decommissioning A Unit 2: Long-term shutdown	Unit 1: Decommissioning A Unit 2: Long-term shutdown Unit 3: Construction B	Unit 1: Construction A	Unit 1: Construction A
1	BM0020	Oversight of operator's periodic inspection	2	0	1	2		
2	BM1040	Heat sink performance	2	1	0	1		
3	BM0060	Maintenance effectiveness assessments	8	1	0	1		
4	BM0100	Design control	5	2	1	2		
5	BM0110	Work control	12	12	11	5		
6	BO0010	Surveillance tasting	5	10	4	4		
7	BO1020	System configuration of equipment	8	3	4	4		
8	BO1030	Reactor start-up and shutdown	0	0	0	0		
9	BO1040	Operability determination and functionality assessments	9	7	6	5		
10	BO0060	Nuclear fuel control (Transportation and storage)	4	2	0	1		
11	BO1070	Capability of operating personnel	1	1	2	1		
12	BE0010	Protection against natural disaster	2	2	1	2		
13	BE0020	Fire protection	7	7	7	8		
14	BE0030	Internal flood protection	3	1	0	1		
15	BE0040	Maintaining of emergency response organization	2	1	1	1		
16	BE0050	Emergency preparedness and maintenance	3	2	1	3		
17	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	0	0	0	0		
18	BE0070	Evaluation of training for personnel to respond to severe accidents, etc.	0	0	0	0		
19	BE0090	Seismic protection	2	2	1	2		
20	BE0100	Tsunami protection	2	1	1	1		
21	BR0010	Radiation exposure control	5	4	3	3		
22	BR0050	Radioactive gas/liquid waste management	0	0	0	0		
23	BR0070	Radioactive solid waste management	4	4	1	4		
24	BR0090	Radiation monitoring equipment	0	0	0	0		
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1		
26		Operation of Quality Management System (Semiannual)	2	2	5	2		
27	BQ0040	Performance Indicator Verification	2	1	1	1		
28	BQ0050	Initial response to occurrence of an event	0	1	1	0		
Total			91	68	53	55		

Unit: Number of samples

[Explanatory notes]

- (1) "Operation" : In service in compliance with new completing response to new regulatory requirements.
- (2) "Long-term shutdown" : Long-term shutdown, in preparation in compliance with new regulatory requirements.
- (3) "Decommissioning A": Decommissioning approved with spent fuel SFP. The same inspection is performed as in the long-term shutdown.
- (4) "Decommissioning B": Decommissioning approved with no spent fuel SFP.

- (5) “Decommissioning review” : Under review for decommissioning. The same inspection is performed as in the long-term shutdown.
- (6) “Decommissioning planned” : Planned to apply for decommissioning. The same inspection is performed as in the long-term shutdown.
- (7) “Construction A”: In the construction phase with no new fuel delivered.
- (8) “Construction B”: In the construction phase with new fuel delivered. The same inspection is performed as in the long-term shutdown.

(Routine Inspection (Nuclear Fuel Cycle Facilities, etc.))

No.	Guide No.	Inspection guide name	JNFL					Rokkasho Safeguards Center	[Decommissioning] JAEA First Nuclear Powered Ship Reactor Facilities (no nuclear fuel materials in the plants, etc.)	Recyclable Fuel Storage Center
			Rokkasho Reprocessing Facility	MOX Fuel Fabrication Facility	Fuel fabrication facility	Waste storage facility	Waste disposal facility			
1	BM0020	Oversight of operator's periodic inspection	5		4	3			1	
2	BM1040	Heat sink performance								
3	BM0060	Maintenance effectiveness assessments	5		5	1	3	1	-	
4	BM0100	Design control	6		2	1	1	1		
5	BM0110	Work control	5		3	1	15	1	1	
6	BO0010	Surveillance testing	14		4	1		1	-	
7	BO1020	System configuration of equipment								
8	BO1030	Reactor start-up and shutdown								
9	BO1040	Operability determinations and functionality assessments								
10	BO0060	Nuclear fuel control (Transportation and storage)	2							
11	BO1070	Capability of operating personnel								
12	BO2010	Operation management	11		18	4	8	2		
13	BO2020	Critical safety management	10		2			1		
14	BO2030	Experiment								
15	BE0010	Protection against natural disaster	4		4	1	4	1	1	
16	BE0020	Fire protection	14		6	1	2	1	1	
17	BE0030	Internal flood protection	2		2	1	1	1	-	
18	BE0040	Maintaining of emergency response organization	1		3	1	1	1		
19	BE0050	Emergency preparedness and maintenance	1		4	1	1	1		
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	6		8					
21	BE0090	Seismic protection	4		2	1	1	1	-	
22	BE0100	Tsunami protection								
23	BR0010	Radiation exposure control	6		5	2	3	2	1	
24	BR0070	Radioactive solid waste management	3		5	1	1	1	1	
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26	BQ0010	Operation of Quality Management System (Semiannual)	5	1	3	1	1	1	1	1
27	BQ0040	Performance Indicator Verification	1	-	1	1	1	1	1	-
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			106	2	82	23	44	19	9	2

Unit: Number of samples

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(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	Mitsubishi Nuclear Fuel	Tokai Works , Nuclear Fuel Industries	JAEA Nuclear Science Research Institute					
					Nuclear Science Research Institute	Waste disposal facility	(including radioactive waste processing site) JR-R-3	Static Experiment Critical Facility (STACY)	Nuclear Safety Research Reactor (NSRR)	[Decommissioning] Fast Critical Assembly (FCA) (no nuclear fuel materials in the core)
1	BM0020	Oversight of operator's periodic inspection	4	4			6	4	4	1
2	BM1040	Heat sink performance								
3	BM0060	Maintenance effectiveness assessments	2	3	1	-	2	1	1	1
4	BM0100	Design control	5	-	1	-	1	1	-	-
5	BM0110	Work control	2	4	1	2	6	3	2	-
6	BO0010	Surveillance testing	6	4	1		4	1	1	-
7	BO1020	System configuration of equipment								
8	BO1030	Reactor start-up and shutdown								
9	BO1040	Operability determinations and functionality assessments								
10	BO0060	Nuclear fuel control (Transportation and storage)	1	-	1		2	1	1	1
11	BO1070	Capability of operating personnel								
12	BO2010	Operation management	8	4	2	-	8	-	2	
13	BO2020	Critical safety management	4	3	1					
14	BO2030	Experiment					2	-	2	
15	BE0010	Protection against natural disaster	2	1	1	-	1	2	2	-
16	BE0020	Fire protection	3	2	1	-	4	1	1	-
17	BE0030	Internal flood protection	1	1	1	-	1	1	1	
18	BE0040	Maintaining of emergency response organization	1	1	1	-	1	1	1	
19	BE0050	Emergency preparedness and maintenance	1	1	1	-	1	1	-	
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	2	2						
21	BE0090	Seismic protection	2	2	1	-	2	1	1	-
22	BE0100	Tsunami protection			-					
23	BR0010	Radiation exposure control	10	4	2		5	2	2	1
24	BR0070	Radioactive solid waste management	5	2	1	-	2	1	1	1
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26	BQ0010	Operation of Quality Management System (Semiannual)	2	2	1	-	2	1	1	-
27	BQ0040	Performance Indicator Verification	1	1	1	-	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			63	42	20	3	52	24	25	7

Unit: Number of samples

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(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	JAEA Nuclear Science Research Institute				JAEA Oarai Research and Development Institute			
			[Decommissioning] (no nuclear fuel materials in the plants, etc.)	[Decommissioning] (no nuclear fuel materials in the plants, etc.)	[Decommissioning] (no nuclear fuel materials in the plants, etc.)	[Decommissioning] (no nuclear fuel materials in the plants, etc.)	High Temperature Engineering Test Reactor (HTTR)	Experimental Fast Reactor (Ioyo)	[Decommissioning] (no nuclear fuel materials in the core)	[Decommissioning] (no nuclear fuel materials in the core)
1	BM0020	Oversight of operator's periodic inspection	1	1	1	1	4	4	1	1
2	BM1040	Heat sink performance	/	/	/	/	/	/	/	/
3	BM0060	Maintenance effectiveness assessments	1	1	1	1	1	1	1	1
4	BM0100	Design control	-	-	-	-	1	1	-	-
5	BM0110	Work control	-	-	-	-	1	1	-	-
6	BO0010	Surveillance testing	-	-	-	-	4	4	1	1
7	BO1020	System configuration of equipment	/	/	/	/	/	/	/	/
8	BO1030	Reactor start-up and shutdown	/	/	/	/	/	/	/	/
9	BO1040	Operability determinations and functionality assessments	/	/	/	/	/	/	/	/
10	BO0060	Nuclear fuel control (Transportation and storage)	/	/	1	/	1	1	1	1
11	BO1070	Capability of operating personnel	/	/	/	/	/	/	/	/
12	BO2010	Operation management	/	/	/	/	5	5	/	/
13	BO2020	Critical safety management	/	/	/	/	/	/	/	/
14	BO2030	Experiment	/	/	/	/	-	-	/	/
15	BE0010	Protection against natural disaster	-	-	-	-	1	1	/	/
16	BE0020	Fire protection	-	-	-	-	3	3	1	1
17	BE0030	Internal flood protection	/	/	/	/	1	1	/	/
18	BE0040	Maintaining of emergency response organization	/	/	/	/	1	1	/	/
19	BE0050	Emergency preparedness and maintenance	/	/	/	/	1	1	/	/
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	/	/	/	/	/	/	/	/
21	BE0090	Seismic protection	-	-	-	-	1	1	/	/
22	BE0100	Tsunami protection	/	/	/	/	/	/	/	/
23	BR0010	Radiation exposure control	1	1	1	1	5	5	1	2
24	BR0070	Radioactive solid waste management	1	1	1	1	2	2	1	2
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26	BQ0010	Operation of Quality Management System (Semiannual)	-	-	-	-	1	1	-	-
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			6	6	7	6	35	35	9	11

Unit: Number of samples

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No.	Guide No.	Inspection guide name	JAEA Oarai Research and Development Institute			JAEA Nuclear Fuel Cycle Engineering Laboratories		[Decommissioning] The University of Tokyo Nuclear Reactor "Yayoi" (no nuclear fuel materials in the core)	MHI Nuclear Development Corporation	Nippon Nuclear Fuel Development (NFD)
			JAEA Oarai Research and Development Institute (north)	JAEA Oarai Research and Development Institute (south)	Specified Radioactive Waste Interim Storage Facility	[Decommissioning] Tokai Reprocessing Facility	Nuclear Fuel Cycle Engineering Laboratories			
1	BM0020	Oversight of operator's periodic inspection	/	/	3	12	/	1	/	/
2	BM1040	Heat sink performance	/	/	/	/	/	/	/	/
3	BM0060	Maintenance effectiveness assessments	2	2	2	8	1	2	1	2
4	BM0100	Design control	1	1	1	5	1	-	1	1
5	BM0110	Work control	1	1	1	6	4	-	1	1
6	BO0010	Surveillance testing	2	4	1	8	1	1	1	2
7	BO1020	System configuration of equipment	/	/	/	/	/	/	/	/
8	BO1030	Reactor start-up and shutdown	/	/	/	/	/	/	/	/
9	BO1040	Operability determinations and functionality assessments	/	/	/	/	/	/	/	/
10	BO0060	Nuclear fuel control (Transportation and storage)	1	1	/	1	1	-	1	1
11	BO1070	Capability of operating personnel	/	/	/	/	/	/	/	/
12	BO2010	Operation management	2	3	3	5	2	/	2	2
13	BO2020	Critical safety management	1	1	1	5	1	/	1	1
14	BO2030	Experiment	/	/	/	/	/	/	/	/
15	BE0010	Protection against natural disaster	1	2	1	4	1	/	1	2
16	BE0020	Fire protection	1	1	1	8	2	1	1	1
17	BE0030	Internal flood protection	1	1	1	2	1	/	1	1
18	BE0040	Maintaining of emergency response organization	1	1	1	1	1	/	1	1
19	BE0050	Emergency preparedness and maintenance	1	1	1	2	1	/	1	1
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	/	/	/	3	/	/	/	/
21	BE0090	Seismic protection	1	1	1	3	1	/	1	1
22	BE0100	Tsunami protection	/	/	/	5	-	/	/	/
23	BR0010	Radiation exposure control	2	4	3	6	3	3	2	4
24	BR0070	Radioactive solid waste management	1	1	1	3	1	1	2	1
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26	BQ0010	Operation of Quality Management System (Semiannual)	1	1	1	2	1	1	1	1
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	1	-	-	1
Total			22	28	25	91	26	12	21	26

Unit: Number of samples

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No.	Guide No.	Inspection guide name	Tokai Safeguards Center	Toshiba Nuclear Engineering Laboratory	[Decommissioning] Toshiba Nuclear Critical Assembly (NCA)	[Decommissioning] (no nuclear fuel materials in the plants, etc.) Toshiba (TTR-1)	[Decommissioning] (no nuclear fuel materials in the plants, etc.) Atomic Energy Research Laboratory, Tokyo City University	[Decommissioning] (no nuclear fuel materials in the plants, etc.) Hitachi Training Reactor at Ozeji Center (HTR)	[Decommissioning] Institute for Atomic Energy, Rikkyo University (no nuclear fuel materials in the plants, etc.)	Global Nuclear Fuel-Japan Co., Ltd.
1	BM0020	Oversight of operator's periodic inspection			3	1	1	1	2	6
2	BM1040	Heat sink performance								
3	BM0060	Maintenance effectiveness assessments	1	1	1	1	1	1	-	2
4	BM0100	Design control	1	-	1	-			-	-
5	BM0110	Work control	1	1	1	-	-	1		4
6	BO0010	Surveillance testing	1	1	-					4
7	BO1020	System configuration of equipment								
8	BO1030	Reactor start-up and shutdown								
9	BO1040	Operability determinations and functionality assessments								
10	BO0060	Nuclear fuel control (Transportation and storage)		1	1					-
11	BO1070	Capability of operating personnel								
12	BO2010	Operation management	2	1						4
13	BO2020	Critical safety management	1	1						2
14	BO2030	Experiment								
15	BE0010	Protection against natural disaster	1	-	-	-				2
16	BE0020	Fire protection	1	1	1	1			1	4
17	BE0030	Internal flood protection	1	1	-					1
18	BE0040	Maintaining of emergency response organization	1	1	1					1
19	BE0050	Emergency preparedness and maintenance	1	1	1					1
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.								2
21	BE0090	Seismic protection	1	-	-	-				1
22	BE0100	Tsunami protection								
23	BR0010	Radiation exposure control	2	1	1	1	1	1	-	4
24	BR0070	Radioactive solid waste management	1	1	1	1	1	1	1	2
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26	BQ0010	Operation of Quality Management System (Semiannual)	1	1	1	1	1	1	1	2
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			19	15	15	8	7	8	6	44

Unit: Number of samples

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No.	Guide No.	Inspection guide name	[Decommissioning] Prototype Advanced Thermal Reactor (FUGEN) (no nuclear fuel materials in the core)	[Decommissioning] Prototype Fast Breeder Reactor (MONJU) (no nuclear fuel materials in the core)	Kumatori Works, Nuclear Fuel Industries	Kyoto University KUR (Kyoto University Research Reactor), Institute for Integrated Radiation and Nuclear Science Kyoto University Critical Assembly (KUCA), Institute for Integrated Radiation and Nuclear Science	Atomic Energy Research Institute, Kindai University (UTR)	Ningyo-toge Environmental Engineering Center, JAEA	[Decommissioning] Ningyo-toge Environmental Engineering Center, JAEA (Contains nuclear fuel materials in the plants, etc.)
1	BM0020	Oversight of operator's periodic inspection	4	5	4	4	4		1
2	BM1040	Heat sink performance	/	1	/	/	/	/	/
3	BM0060	Maintenance effectiveness assessments	2	2	3	2	3	1	1
4	BM0100	Design control	1	1	-	-	1	-	-
5	BM0110	Work control	4	4	4	1	4	1	2
6	BO0010	Surveillance testing	-	-	4	1	4	1	2
7	BO1020	System configuration of equipment	3	1	/	/	/	/	/
8	BO1030	Reactor start-up and shutdown	/	/	/	/	/	/	/
9	BO1040	Operability determinations and functionality assessments	1	1	/	/	/	/	/
10	BO0060	Nuclear fuel control (Transportation and storage)	0	1	-	-	1	1	2
11	BO1070	Capability of operating personnel	/	1	/	/	/	/	/
12	BO2010	Operation management	/	/	6	-	6	2	3
13	BO2020	Critical safety management	/	/	2	/	/	/	1
14	BO2030	Experiment	/	/	/	-	2	2	/
15	BE0010	Protection against natural disaster	2	1	1	1	2	1	2
16	BE0020	Fire protection	5	5	2	2	3	1	1
17	BE0030	Internal flood protection	1	1	1	0	2	-	1
18	BE0040	Maintaining of emergency response organization	1	0	1	1	1	1	2
19	BE0050	Emergency preparedness and maintenance	3	1	1	1	1	1	2
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	/	3	1	/	/	/	/
21	BE0090	Seismic protection	1	1	2	1	1	1	1
22	BE0100	Tsunami protection	/	-	/	/	/	/	/
23	BR0010	Radiation exposure control	6	4	4	2	4	2	2
24	BR0070	Radioactive solid waste management	2	8	7	3	4	1	1
25	BQ0010	Operation of Quality Management System (Routine)	1	1	2	1	1	1	1
26	BQ0010	Operation of Quality Management System (Semiannual)	3	2	2	2	2	1	1
27	BQ0040	Performance Indicator Verification	1	2	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	1	-	-	-	-	-	2
Total			42	46	48	23	47	23	27

Unit: Number of samples

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(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

(Team Inspection)

No.	Guide No.	Inspection guide name	FY 2023							
			Results in the 1st quarter	No. of Cases	Results in the 2nd quarter	No. of Cases	Results in the 3rd quarter	No. of Cases	Results in the 4th quarter	No. of Cases
1	BM0010	Oversight of pre-service operator inspection	(Onagawa) (Tokai Daini) (Kashiwazaki-Kariwa) Takahama Shimane Ikata (Genkai) Sendai (JNFL concentration) (Kumatori Office, NFI) Kyoto University KUR (JAEA STACY) (RFS) (JNFL Reprocessing) (Waste management facility, JAEA) JAEA Nuclear Science Research Institute facilities JAEA Oarai Research and Development Institute facilities MHI Nuclear Development Corporation	8	(Onagawa) (Tokai Daini) Kashiwazaki-Kariwa (Mihama) (Ohi) Takahama (Genkai) JNFL concentration (Kumatori Office, NFI) (JNFL MOX fuel fabrication) (JAEA HTTR) (RFS) (JNFL Reprocessing) (Waste management facility, JAEA) JAEA Nuclear Science Research Institute facilities JAEA Nuclear Fuel Cycle Engineering Laboratories facilities MHI Nuclear Development Corporation	6	(Onagawa) (Tokai Daini) (Kashiwazaki-Kariwa) Mihama Ohi Takahama Ikata (Shimane) Genkai (JNFL concentration) (JNFL MOX fuel fabrication) Kumatori Office, NFI (JNFL MOX fuel fabrication) JAEA HTTR JAEA STACY (RFS) (JNFL Reprocessing) (Waste management facility, JAEA) JAEA Nuclear Science Research Institute facilities (JAEA Nuclear Fuel Cycle Engineering Laboratories facilities) Nippon Nuclear Fuel Development	10	Onagawa (Tokai Daini) (Kashiwazaki-Kariwa) Mihama Ohi Takahama Ikata (Shimane) Genkai (JNFL concentration) (JNFL MOX fuel fabrication) (JNFL Reprocessing) (JAEA STACY) (Processing site, JAEA) (RFS) JAEA Nuclear Science Research Institute facilities (Waste management facility, JAEA) JAEA Nuclear Fuel Cycle Engineering Laboratories facilities (JAEA Ningyotoge facilities) Nippon Nuclear Fuel Development	10
2	BM1050	Oversight of in-service inspection	(Onagawa) (Kashiwazaki-Kariwa) Ikata Sendai	2	(Ohi) Takahama (Shimane) Sendai	2	(Kashiwazaki-Kariwa) (Mihama) Ohi Takahama Genkai	3	(Onagawa) Kashiwazaki-Kariwa Mihama (Ohi) Takahama	3
3	BM0100	Design control	—	0	Sendai, JNFL Reprocessing	2	Ikata	1	(Genkai)	0
4	BO1050	Safety of replaced core	Takahama Unit 1 Ikata Unit 3 Sendai Unit 2	3	Takahama Unit 2	1	Ohi Unit 4 Takahama Unit 3 Mihama Unit 3 Genkai Unit 3	4	Takahama Unit 4 Ohi Unit 3 Kashiwazaki-Kariwa Unit 7	3
5	BO1070	Capability of operating personnel*1	—	0	—	0	All NPP except for decommissioning measure plant	15	—	0
6	BE0021	Fire protection (Triennial)	Ohi	1	Sendai	1	Sendai Ikata	2	Ikata (Genkai) Sendai	2
7	BE0070	Evaluation of training for personnel to respond to severe accidents, etc.	Takahama (Genkai)	1	Mihama Takahama Genkai	3	(Mihama) Ohi Takahama Ikata Sendai	4	(Kashiwazaki-Kariwa) Mihama Takahama Sendai	3
8	BE0080	Evaluation of scenario for drills for severe accidents, etc.	Takahama Genkai (Mihama)	2	Mihama Takahama Genkai (Ikata) (Sendai)	3	(Onagawa) (Kashiwazaki-Kariwa) Mihama Ohi Takahama Ikata Sendai	5	(Onagawa) Kashiwazaki-Kariwa (Ohi) Takahama Sendai	3
9	BR0020	Radiation exposure evaluation and	JNFL Reprocessing Tsuruga	4	Tohoku Higashidori Ohi	3	Hamaoka Mihama	3	Kashiwazaki-Kariwa Takahama	2

		personal monitoring	Ikata Onagawa		Tomari		Shika			
10	BR0030	ALARA activities for radiation exposure control	JNFL Reprocessing Tsuruga Ikata Onagawa	4	Tohoku Higashidori Ohi Tomari	3	Hamaoka Mihama Shika	3	Kashiwazaki-Kariwa Takahama	2
11	BR0040	Management and reduction of airborne radioactive substances	JNFL Reprocessing Tsuruga Ikata Onagawa	4	Tohoku Higashidori Ohi (Tomari)	2	Hamaoka Mihama Shika Tomari	4	Kashiwazaki-Kariwa Takahama	2
12	BR0050	Radioactive gas/liquid waste management	JNFL Reprocessing Tsuruga	2	Tohoku Higashidori Tomari	2	Hamaoka Genkai Shika	3	Kashiwazaki-Kariwa Sendai Shimane	3
13	BR0080	Radiation environment monitoring program	JNFL Reprocessing Tsuruga	2	Tohoku Higashidori Tomari	2	Hamaoka Genkai Shika	3	Kashiwazaki-Kariwa Sendai Shimane	3
14	BR0090	Radiation monitoring equipment	JNFL Reprocessing Tsuruga	2	Tohoku Higashidori Tomari	2	Hamaoka Genkai Shika	3	Kashiwazaki-Kariwa Sendai Shimane	3
15	BQ0010	Operation of quality management system*2	Ohi (Ikata)	1	Sendai Ikata (Takahama) Onagawa (Shimane) (Kashiwazaki-Kariwa)*3	3	Shimane (Mihama) (Takahama) Kashiwazaki-Kariwa*3 (JAEA Reprocessing)	2	Mihama Takahama Genkai JAEA Reprocessing	4
16	Physical protection of nuclear material*4		Tomari Tohoku Higashidori (a) Tohoku Higashidori (b) JNFL concentration and burial Ohma RFS NMCC Rokkasho Fukushima Daini (a) Fukushima Daini (b) JAEA Oarai (a) JAEA Oarai (b) JAEA Nuclear Fuel Cycle Engineering Laboratories JAEA Nuclear Science Research Institute (a) JAEA Nuclear Science Research Institute (b) MHI GNF-J Toshiba Kashiwazaki-Kariwa Hamaoka Tsuruga Ohi (a) Ohi (b) Mihama Takahama FUGEN MONJU Kindai University (a) Kindai University (b)	29	Tomari Tohoku Higashidori (a) Tohoku Higashidori (b) JNFL concentration and burial Ohma RFS NMCC Rokkasho Fukushima Daini (a) Fukushima Daini (b) JAEA Oarai (a) JAEA Oarai (b) JAEA Nuclear Fuel Cycle Engineering Laboratories JAEA Nuclear Science Research Institute (a) JAEA Nuclear Science Research Institute (b) MHI GNF-J Toshiba Kashiwazaki-Kariwa Hamaoka Tsuruga Ohi (a) Ohi (b) Mihama Takahama FUGEN MONJU Kindai University (a) Kindai University (b)	37	Tomari (a) Tomari (b) Tohoku Higashidori JNFL Reprocessing (a) JNFL Reprocessing (b) JNFL Waste JNFL MOX JNFL concentration and burial Ohma RFS Onagawa Fukushima Daini Kashiwazaki-Kariwa (a) Kashiwazaki-Kariwa (b) Kashiwazaki-Kariwa (c) Tokai Daini JAEA Oarai (a) JAEA Oarai (b) JAEA Oarai (c) JAEA Reprocessing JAEA Nuclear Science Research Institute (a) JAEA Nuclear Science Research Institute (b) JAEA Nuclear Science Research Institute (c) JAEA Nuclear Science Research Institute (d) NFD NMCC Tokai GNF-J Shika	45	Tohoku Higashidori JNFL Reprocessing (a) JNFL Reprocessing (b) Onagawa (a) Onagawa (b) Tokai Daini JAEA Oarai (a) JAEA Oarai (b) JAEA Reprocessing (a) JAEA Reprocessing (b) JAEA Nuclear Fuel Cycle Engineering Laboratories Mitsubishi Nuclear Fuel (a) Mitsubishi Nuclear Fuel (b) Tokai Office, Nuclear Kashiwazaki-Kariwa (a) Kashiwazaki-Kariwa (b) Kashiwazaki-Kariwa (c) Hamaoka Tsuruga (a) Tsuruga (b) Ohi Takahama Kumatori Office, Nuclear Fuel Industries (a) Kumatori Office, Nuclear Fuel Industries (b) Sendai	25

		Kumatori Office, Nuclear Fuel Industries (a)		Kumatori Office, Nuclear Fuel Industries (a) Kumatori Office, Nuclear Fuel Industries (b) Kyoto University (a) Kyoto University (b) Mitsubishi Electric Shimane (a) Shimane (b) Genkai Sendai		Hamaoka (a) Hamaoka (b) Tsuruga (a) Tsuruga (b) Mihama Takahama (a) Takahama (b) Takahama (c) FUGEN Kyoto University (a) Kyoto University (b) Ningyotoge (a) Ningyotoge (b) Shimane Ikata Genkai Sendai			
		Total	65	Total	72	Total	110	Total	68

*1: Among the inspection items, “Appropriateness for operation personnel test” is implemented in team inspection.

*2: Among the inspection items, “annual inspection” is implemented in team inspection.

Legend

- The number of cases: The number of facilities with one or more inspections completed in the said quarter.
- ([Name]) : The facilities where inspections have been implemented although no inspections are completed in the said quarter (excluded from the number of cases)

((Team Inspection based on Legal Requirements) Excluding Pre-use Inspection)

[Results in the first quarter]: 5 cases

- Confirmation of off-site transportation (inspection of nuclear fuel control (transportation and storage))
 - Mitsubishi Nuclear Fuel Co., Ltd
 - Genkai Nuclear Power Station of Kyushu Electric Power Company.
- Confirmation of waste package (inspections of work control)
 - Waste Disposal Facility, Japan Nuclear Fuel Limited (implemented at Takahama PS, The Kansai Electric Power Company.)
- Confirmation of radioactivity concentration (inspections of radioactive solid waste management)
 - Prototype Advanced Thermal Reactor FUGEN, Japan Atomic Energy Agency
- Confirmation of decommissioning measures completion (inspections of non-applicable users, etc.)
 - Kobe Works, Mitsubishi Electric Corporation

[Results in the second quarter]: 7 cases

- Confirmation of off-site transportation (inspection of nuclear fuel control (transportation and storage))
 - Nuclear Fuel Industries, Ltd. (Tokai) (2 applications)
 - Japan Atomic Energy Agency (JMTRC)
 - Ikata Power Station, Shikoku Electric Power Company. (2 applications)
 - Mitsubishi Nuclear Fuel Co., Ltd
- Confirmation of radioactivity concentration (inspections of radioactive solid waste management)
 - Hamaoka Nuclear Power Station, Chubu Electric Power Company.

[Results in the third quarter]: 8 cases

- Confirmation of waste package (inspections of work control)
 - Waste Disposal Facility, Japan Nuclear Fuel Limited (implemented at Tokai Daini PS, The Japan Atomic Power Company)
 - Waste Disposal Facility, Japan Nuclear Fuel Limited (implemented at Ikata PS, Shikoku Electric Power Company.)
- Confirmation of off-site transportation (inspection of nuclear fuel control (transportation and storage))
 - Japan Atomic Energy Agency (JMTRC, etc.) (3 applications)
 - Mitsubishi Nuclear Fuel Co., Ltd

- Confirmation of decommissioning measures completion (inspections of non-applicable users, etc.)
 - Iwakura Plant, Ishizuka Glass Co., Ltd.
 - Hanawa Mining Co., Ltd.

[Results in the fourth quarter]: 4 cases

- Confirmation of waste package (inspections of work control)
 - Waste Disposal Facility, Japan Nuclear Fuel Limited (implemented at Tomari PS, Hokkaido Electric Power Company.)
 - Waste Disposal Facility, Japan Nuclear Fuel Limited (implemented at Sendai NPS, Kyushu Electric Power Company.)
 - Waste Disposal Facility, Japan Nuclear Fuel Limited (implemented at Shika NPS, Hokuriku Electric Power Company)
- Confirmation of off-site transportation (inspections of nuclear fuel control (transportation and storage))
 - Mitsubishi Nuclear Fuel Co., Ltd

(Facilities, etc. Not Subject to Article 41 of the Cabinet Order of the Reactor Regulation Act)

No.	Location	Site name	Implementati on period
1	Hokkaido	Storage facility of nuclear fuel materials, Hokkaido University	The first quarter
2	Hokkaido	Research and Development Department, Hokkaido Electric Power Company.	The first quarter
3	Hokkaido	Tomari Nuclear Power Station, Hokkaido Electric Power Company.	Third quarter
4	Aomori	Environmental Radioactivity Monitoring Center, Japan Nuclear Fuel Ltd.	The Second quarter
5	Aomori	Higashidori Nuclear Power Station, Tohoku Electric Power Company.	The Second quarter
6	Miyagi	Onagawa Nuclear Power Station, Tohoku Electric Power Company.	The Third quarter
7	Fukushima	Fukushima Daini Nuclear Power Station, TEPCO	The Third quarter
8	Ibaraki	Naka Institute for Fusion Science and Technology, National Institutes for Quantum Science and Technology	The 4th Quarter
9	Ibaraki	Tokai PS, The Japan Atomic Power Co.	The Second quarter
10	Ibaraki	Tokai Daini PS, The Japan Atomic Power Co.	The Second quarter
11	Ibaraki	Material Research and Development Department, The Technology Division, Furukawa Co., Ltd.	The Third quarter
12	Ibaraki	Tsukuba Factory, Furuuchi Chemical Co.	The 4th Quarter
13※1	Gunma	R&D Center, Taiyo Yuden Co., Ltd.	The first quarter
14	Saitama	Faculty of Science and Engineering, Toyo University	The first quarter
15	Chiba	Ichihara Factory, JNC petro chemical Co., Ltd,	The Second quarter
16	Chiba	Abiko Operation and Service Center, Central Research Institute of Electric Power Industry	The Third quarter
17	Tokyo	Tokyo Factory, Fuji Electric Co., Ltd.	The Third quarter
18	Kanagawa	Atsugi Laboratories, Fujitsu	The 4th Quarter
19	Kanagawa	Tsurumi Research Center, Mitsubishi Chemical Corporation	The Third quarter
20	Kanagawa	Fujisawa Plant, Kanto Aircraft Instrument Co., Ltd.	The Second quarter
21	Kanagawa	AGC Yokohama Technical Center, AGC Inc.	The first quarter
22	Niigata	Kashiwazaki Kariwa Nuclear Power Station, TEPCO	The first quarter
23	Fukui	Prototype Fast Breeder Reactor MONJU, JAEA	The Second quarter
24	Fukui	Ohi PS, The Kansai Electric Power Company.	The Second quarter
25	Shizuoka	Hamaoka Nuclear Power Station, Chubu Electric Power Company.	The Second quarter
26	Aichi	Graduate School of Engineering and School of Engineering, Nagoya University	The Third quarter

No.	Location	Site name	Implementati on period
27	Aichi	Nagoya Institute of Technology	The Third quarter
28	Aichi	Kinuura Works, Production Division, NIPPON STEEL Stainless Steel Corporation	The 4th Quarter
29	Kyoto	Kyoto Head Office, Shofu Inc.	The first quarter
30	Osaka	Graduate School of Engineering, The University of Osaka	The Second quarter
31	Osaka	Sugimoto District Office, Osaka Metropolitan University	The Third quarter
32	Osaka	Institute for Integrated Radiation and Nuclear Science, Kyoto University	The 4th Quarter
33	Shimane	Shimane Nuclear Power Station, The Chugoku Electric Power Company.	The first quarter
34	Ehime	Ikata Power Station, Shikoku Electric Power Company.	The Second quarter
35	Fukuoka	Iizuka Factory, Nippon Tungsten Co., Ltd. [Nuclear fuel materials, nuclear source materials]	The 4th Quarter
36	Nagasaki	Faculty of Fisheries, Nagasaki University	The 4th Quarter

*1: Inspections were conducted in FY 2023 because FY 2022 inspections were incomplete.
(The total number of nuclear fuel material users not subject to Article 41 of the Cabinet Order of the Nuclear Reactor Regulation Act is 189 and that of nuclear material users is 17 (as of May 1, 2024).)

(3) Comprehensive Assessment in FY 2023 and Inspection plans in FY 2024

(i) Comprehensive Assessment in FY 2023

Nuclear Facility			Comprehensive assessment*
Hokkaido Electric Power Company.	Tomari NPS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(i)
Tohoku Electric Power Company.	Higashidori NPS	Unit 1	(i)
	Onagawa NPS	Unit 1	(i)
		Unit 2	(i)
Tokyo Electric Power Company Holdings, Inc.	Fukushima Daini NPS	Unit 3	(i)
		Unit 4	(i)
		Unit 1	(i)
		Unit 2	(i)
	Kashiwazaki Kariwa NPS	Unit 3	(iii)
		Unit 4	(iii)
		Unit 5	(iii)
		Unit 6	(iii)
		Unit 7	(iii)
		Unit 2	(iii)
The Japan Atomic Power Company	Tokai NPS	-	(i)
	Tokai Daini NPS	-	(i)
Chubu Electric Power Company, Inc.	Hamaoka NPS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(i)
		Unit 4	(i)
		Unit 5	(i)
Hokuriku Electric Power Company	Shika NPS	Unit 1	(i)
		Unit 2	(i)
The Japan Atomic Power Company	Tsuruga NPS	Unit 1	(i)
		Unit 2	(i)
Kansai Electric Power Company, Inc.	Mihama NPS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(i)
	Ohi NPS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(i)
		Unit 4	(i)
	Takahama PS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(ii)
		Unit 4	(i)
The Chugoku Electric Power Company.	Shimane NPS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(i)
Shikoku Electric Power Company, Inc.	Ikata NPS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(i)
Kyushu Electric Power Company, Inc.	Genkai NPS	Unit 1	(i)
		Unit 2	(i)
		Unit 3	(i)

Nuclear Facility			Comprehensive assessment*
		Unit 4	(i)
Kyushu Electric Power Company, Inc.	Sendai NPS	Unit 1	(i)
		Unit 2	(i)
Electric Power Development Co. Ltd.	Ohma NPS	—	(i)
Japan Nuclear Fuel Ltd.	Reprocessing facility of the reprocessing plant		(i)
	Waste storage facility of the reprocessing plant		(i)
	Fabrication facility of the enrichment and disposal plant		(i)
	Waste burial facility of the enrichment and disposal plant		(i)
	MOX Fuel Fabrication Facility, Reprocessing Plant		(i)
Nuclear Material Control Center (NMCC)	Nuclear fuel material usage facilities, Rokkasho Safeguards Center		(i)
	Nuclear fuel material usage facilities, Tokai Safeguards Center		(i)
Japan Atomic Energy Agency	Nuclear fuel material usage facility, Oarai Research and Development Institute (South Area)		(i)
	Waste treatment facility, Oarai Research and Development Institute		(i)
	Nuclear fuel material usage facility, Nuclear Fuel Cycle Engineering Laboratories		(i)
	Waste burial facility, Nuclear Science Research Institute		(i)
	Nuclear fuel material usage facility, Nuclear Science Research Institute		(i)
	Nuclear fuel material usage facility, Oarai Research and Development Institute (North Area)		(i)
	NSRR (Nuclear Safety Research Reactor), Nuclear Science Research Institute		(i)
	Experimental Fast Reactor (Joyo), Oarai Research and Development Institute (South Area)		(i)
	HTTR (High Temperature Engineering Test Reactor), Oarai Research and Development Institute (North Area)		(i)
	TRACY (Transient Experiment Critical Facility), Nuclear Science Research Institute		(i)
	TCA (Tank-type Critical Assembly), Nuclear Science Research Institute		(i)
	JRR-3, Nuclear Science Research Institute		(i)
	FCA (Fast Critical Assembly), Nuclear Science Research Institute		(i)
	Reprocessing Facility, Nuclear Fuel Cycle Engineering Laboratories		(i)
	STACY (Static Experiment Critical Facility), Nuclear Science Research Institute		(i)
	JMTR (Japan Materials Testing Reactor), Oarai Research and Development Institute (North Area)		(i)
	JRR-2, Nuclear Science Research Institute		(i)
	JRR-4, Nuclear Science Research Institute		(i)
	DCA (Deuterium Critical Assembly), Oarai Research and Development Institute (South Area)		(i)
	Prototype Advanced Thermal Reactor FUGEN		(i)
	Prototype Fast Breeder Reactor MONJU		(i)
	Nuclear fuel material usage facility, Ningyo-toge Environmental Engineering Center		(i)

Nuclear Facility		Comprehensive assessment*
	Uranium fuel fabrication facility, Ningyo-toge Environmental Engineering Center	(i)
	The First Nuclear Powered Ship Reactor Facilities, Aomori Research and Development Center	(i)
Nuclear fuel material usage facility, Nippon Nuclear Fuel Development Co. Ltd.		(i)
Fabrication facility, Mitsubishi Nuclear Fuel Co., Ltd.		(i)
Nuclear fuel material usage facility, MHI Nuclear Development Corporation		(i)
University of Tokyo Nuclear Reactor (Yayoi), Nuclear Professional School, The Graduate School of Engineering, The University of Tokyo		(i)
Atomic Energy Research Laboratory, Tokyo City University of Gotoh Educational Corporation		(i)
Ozenji Center HTR (Hitachi Training Reactor), Hitachi, Ltd.		(i)
Toshiba Energy Systems & Solutions Corporation	TTR-1	(i)
	Nuclear fuel material usage facility of N28-2, Nuclear Engineering Laboratory	(i)
	NCA (Toshiba Nuclear Critical Assembly), Nuclear Engineering Laboratory	(i)
Fabrication facility, Global Nuclear Fuel-Japan Co., Ltd.		(i)
Institute for Atomic Energy, Rikkyo University		(i)
UTR (University Teaching and Research Reactor), Kindai University Atomic Energy Research Institute		(i)
Kyoto University	KUCA (Kyoto University Critical Assembly), Institute for Integrated Radiation and Nuclear Science	(i)
	KUR (Kyoto University Research Reactor), Institute for Integrated Radiation and Nuclear Science	(i)
Nuclear Fuel Industries, Ltd.	Fabrication facility, Tokai Works	(i)
	Fabrication facility, Kumatori Works	(i)
Spent fuel storage facility of Recyclable Fuel Storage Center, Recyclable-Fuel Storage Company		(i)
Storage facility of nuclear fuel materials, Hokkaido University		(i)
Research and Development Department, Hokkaido Electric Power Company.		(i)
Tomari Nuclear Power Station, Hokkaido Electric Power Company.		(i)
Environmental Radioactivity Monitoring Center, Japan Nuclear Fuel Ltd.		(i)
Higashidori Nuclear Power Station, Tohoku Electric Power Company.		(i)
Onagawa Nuclear Power Station, Tohoku Electric Power Company.		(i)
Fukushima Daini Nuclear Power Station, TEPCO		(i)
Naka Institute for Fusion Science and Technology, National Institutes for Quantum Science and Technology		(i)
Tokai PS, The Japan Atomic Power Co.		(i)
Tokai Daini PS, The Japan Atomic Power Co.		(i)
Material Research and Development Department, The Technology Division, Furukawa Co., Ltd.		(i)
Tsukuba Factory, Furuuchi Chemical Co.		(i)
R&D Center, Taiyo Yuden Co., Ltd.		(i)
Faculty of Science and Engineering, Toyo University		(i)
Ichihara Factory, JNC petro chemical Co., Ltd,		(i)
Abiko Operation and Service Center, Central Research Institute of Electric Power Industry		(i)
Tokyo Factory, Fuji Electric Co., Ltd.		(i)
Atsugi Laboratories, Fujitsu		(i)
Tsurumi Research Center, Mitsubishi Chemical Corporation		(i)
Fujisawa Plant, Kanto Aircraft Instrument Co., Ltd.		(i)
AGC Yokohama Technical Center, AGC Inc.		(i)
Kashiwazaki Kariwa Nuclear Power Station, TEPCO		(i)
Prototype Fast Breeder Reactor MONJU, JAEA		(i)
Ohi PS, The Kansai Electric Power Company.		(i)

Nuclear Facility	Comprehensive assessment*
Hamaoka Nuclear Power Station, Chubu Electric Power Company.	(i)
Graduate School of Engineering and School of Engineering, Nagoya University	(i)
Nagoya Institute of Technology	(i)
Kinuura Works, Production Division, NIPPON STEEL Stainless Steel Corporation	(i)
Kyoto Head Office, Shofu Inc.	(i)
Graduate School of Engineering, The University of Osaka	(i)
Sugimoto District Office, Osaka Metropolitan University	(i)
Institute for Integrated Radiation and Nuclear Science, Kyoto University	(i)
Shimane Nuclear Power Station, The Chugoku Electric Power Company.	(i)
Ikata Power Station, Shikoku Electric Power Company.	(i)
Iizuka Factory, Nippon Tungsten Co., Ltd. [Nuclear fuel materials, nuclear source materials]	(i)
Faculty of Fisheries, Nagasaki University	(i)

*: Classification of (a) to (c) is as follows:

- (i) Facilities whose action matrix was Category 1 throughout FY 2023 (17 power plants, 45 units; 84 nuclear fuel facilities, etc.)
 - In the baseline inspections conducted in FY 2023, inspection findings were not confirmed, or were confirmed with the significance level being “green”¹. The safety performance indicator was “green” throughout the year.
 - In addition, no particular problems were found in improvement activities aimed at achieving the activity target in each monitoring area, including corrective activities for inspection findings.
 - Since the action matrix for this classification was Category 1 throughout the year and the purpose of the activity in each monitoring area was satisfied, it is assessed that autonomous improvement can be expected even if performance deteriorates.
- (ii) Facilities whose action matrix was changed to Category 2 in FY 2023 but returned to Category 1 based on the results of supplemental inspections (1 power plant, 1 unit)
[Unit 3 of Takahama Power Station, The Kansai Electric Power Company.]
 - In the baseline inspections conducted in FY 2023, 5 inspection findings were confirmed, but the significance level was all “green”.
 - Regarding the safety performance indicator, based on the report on the 1st quarter performance results received from The Kansai Electric Power Company. on August 9, 2023, the number of cases of deviations from limit conditions for operation in the Facility for Severe Accident Management, etc. over the past four quarters was 4, which resulted in one “white” case in the monitoring areas for severe accident management and large-scale damage management (subcategory). Other cases were all “green”.
 - Based on the fact that the above-mentioned safety performance indicator was “white”, Unit 3 was assessed as being in a state of minor deterioration in safety activities from April 1, 2023, and its action matrix was changed to Category 2. Accordingly, Supplemental Inspection 1 was conducted during the period from December 2023 to March 2024.
 - In the supplemental inspection, it was confirmed that the identification of causes concerning deviations from the above-mentioned limit conditions for operation and the establishment of improvement measures were properly implemented. Consequently, on March 27, 2024, the unit was assessed as being in a state where autonomous improvement is expected even if performance deteriorates, and its action matrix was returned to Category 1.
- (iii) Facilities whose action matrix was changed from Category 4 to Category 1 in FY 2023 (1 power plant, 7 units)
[Units 1 to 7 of Kashiwazaki-Kariwa Nuclear Power Station, TEPCO]
 - In the baseline inspection conducted in FY 2023, 3 inspection findings were confirmed, where the significance level was “green” for all, with the safety performance indicator also being “green” throughout the year.
 - Regarding two incidents concerning physical protection of nuclear material discovered in FY 2020 (improper use of ID cards and partial loss of function of physical protection facility equipment), the significance level was “red”, and it was recognized that, although the activity targets in each monitoring area were satisfied, there was long-term or significant deterioration in the safety activities conducted by the operator. Consequently, the action matrix was changed to Category 4 in FY 2021, and Supplemental Inspection 3 has been continuously conducted thereafter.
 - Through the supplemental inspections conducted until December 2023, confirmation of all of the corrective actions of TEPCO were completed, and it was determined that the deterioration in physical protection of nuclear material concerning the two incidents had been improved. Furthermore, a “system to ensure that improvement measures are not transitory, enabling the detection and autonomous improvement of any deterioration in physical protection of nuclear material before it leads to significant deterioration”, was established and is taking root.
 - Based on the results of these supplemental inspections, on-site investigations, and opinion exchanges with the president of TEPCO, the NRA determined on December 27, 2023 that the inadequacy in physical protection of nuclear material had been improved and that TEPCO's autonomous improvement could be expected in the future, and decided to change the action matrix from Category 4 to Category 1.

¹ For nuclear fuel cycle facilities, the significance level and safety performance indicator were “No additional action”. This also includes cases where only assessment of the severity level was conducted.

(ii) Inspection Plans in FY 2024*1

(Routine Inspection (Power Reactor))

No.	Guide No.	Inspection guide name	Sendai Units 1,2: In operation	Genkai Units1,2: Decommission ing A Units 3,4: In operation	Ikata Unit1: Decommission ing B Unit 2: Decommission ing A Units 3: In operation	Takahama Units 1 to 4: In operation	Ohi Units1,2: Decommission ing A Units 3,4: In operation	Mihama Units1,2: Decommission ing A Units 3: In operation
1	BM0020	Oversight of operator's periodic inspection*2	10	12	14	20	12	7
2	BM1040	Heat sink performance	2	3	2	2	3	2
3	BM0060	Maintenance effectiveness assessments	5	5	5	5	5	5
4	BM0100	Design control	6	6	6	6	6	6
5	BM0110	Work control	4	4	4	4	4	4
6	BO0010	Surveillance tasting	18	22	17	26	22	18
7	BO1020	System configuration of equipment	18	22	16	26	22	18
8	BO1030	Reactor start-up and shutdown	2	2	1	4	2	1
9	BO1040	Operability determination and functionality assessments	20	24	14	28	24	19
10	BO0060	Nuclear fuel control (Transportation and storage)*3	3	4	3	4	4	3
11	BO1070	Capability of operating personnel	5	5	5	5	5	5
12	BE0010	Protection against natural disaster	4	4	4	4	4	4
13	BE0020	Fire protection	13	13	13	13	13	13
14	BE0030	Internal flood protection	3	4	3	4	4	3
15	BE0040	Maintaining of emergency response organization	1	1	1	1	1	1
16	BE0050	Emergency preparedness and maintenance	1	1	1	1	1	1
17	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	10	10	10	10	10	10
18	BE0090	Seismic protection	4	4	4	4	4	4
19	BE0100	Tsunami protection	4	4	4	4	4	4
20	BR0010	Radiation exposure control	6	6	6	6	6	6
21	BR0070	Radioactive solid waste management*3	3	3	3	3	Unit: Number of 3 samples	
22	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1
23		Operation of Quality Management System (Semiannual)	2	2	2	2	2	2
24	BQ0040	Performance Indicator Verification	1	1	1	1	1	1
25	BQ0050	Initial response to occurrence of an event	*3	*3	*3	*3	*3	*3
Total			146	163	140	184	163	141

(Unit: Number of samples)

[Explanatory notes]

(1) "Operation": In service in compliance with new

*1: Set based on the status of reactors as of the end of FY 2023.

- completing response to new regulatory requirements.
- (2) “Long-term shutdown” : Long-term shutdown, in preparation in compliance with new regulatory requirements.
 - (3) “Decommissioning A”: Decommissioning approved with spent fuel SFP. The same inspection is performed as in the long-term shutdown.
 - (4) “Decommissioning B”: Decommissioning approved with no spent fuel SFP.
 - (5) “Decommissioning review” : Under review for decommissioning. The same inspection is performed as in the long-term shutdown.
 - (6) “Decommissioning planned” : Planned to apply for decommissioning. The same inspection is performed as in the long-term shutdown.
 - (7) “Construction A”: In the construction phase with no new fuel delivered.
 - (8) “Construction B”: In the construction phase with new fuel delivered.
- *2: The number of inspection samples for long-term shutdown and decommissioning A/B in No.1 “Supervision for Periodic Operator’s Inspection” is 1/reactor. In the voluntary inspection based on the special maintenance plan during long-term shutdown, the number of samples of No.5 “Work management” is added by 1/reactor.
 - *3: The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	Tomari Units 1 to 3: Long-term shutdown	Higashidori Unit 1: Long- term shutdown	Onagawa Unit 1: Decommission- ing A Unit 2, 3: Long-term shutdown	Kashiwazaki- Kariwa Units 1 to 7: Long-term shutdown	Fukushima Daini Units 1 to 4: Decommission- ing A	Tokai Unit1: Decommission- ing B Unit 2: Long- term shutdown
1	BM0020	Oversight of operator's periodic inspection ^{*2}	*3	*3	1	*3	4	1
2	BM1040	Heat sink performance	1	1	1	2	1	1
3	BM0060	Maintenance effectiveness assessments	1	1	1	1	1	1
4	BM0100	Design control	2	2	2	2	*3	2
5	BM0110	Work control	7	5	6	11	4	5
6	BO0010	Surveillance tasting	4	3	4	7	5	3
7	BO1020	System configuration of equipment	4	3	4	7	5	4
8	BO1030	Reactor start-up and shutdown	0	0	0	0	0	0
9	BO1040	Operability determination and functionality assessments	4	3	4	7	5	4
10	BO0060	Nuclear fuel control (Transportation and storage)*3	1	1	1	2	1	1
11	BO1070	Capability of operating personnel	*3	*3	*3	*3	*3	*3
12	BE0010	Protection against natural disaster	2	2	2	2	2	2
13	BE0020	Fire protection	7	7	7	7	7	7
14	BE0030	Internal flood protection	1	1	1	2	2	1
15	BE0040	Maintaining of emergency response organization	1	1	1	1	1	1
16	BE0050	Emergency preparedness and maintenance	1	1	1	1	1	1
17	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	0	0	0	0	0	0
18	BE0090	Seismic protection	1	1	1	1	1	1
19	BE0100	Tsunami protection	1	1	1	1	1	1
20	BR0010	Radiation exposure control	3	3	3	3	3	3
21	BR0070	Radioactive solid waste management ^{*3}	3	3	3	3	3	3
22	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1
23		Operation of Quality Management System (Semiannual)	2	2	2	2	2	2
24	BQ0040	Performance Indicator Verification	1	1	1	1	1	1
25	BQ0050	Initial response to occurrence of an event	*3	*3	*3	*3	*3	*3
Total			48	43	48	64	51	46

(Unit: Number of samples)

[Explanatory notes]

- (1) "Operation" : In service in compliance with new completing response to new regulatory requirements.
- (2) "Long-term shutdown" : Long-term shutdown, in preparation in compliance with new regulatory requirements.
- (3) "Decommissioning A": Decommissioning approved with spent fuel SFP. The same inspection is performed

*1: Set based on the status of reactors as of the end of FY 2023.

*2: The number of inspection samples for long-term shutdown and decommissioning A/B in No.1 "Supervision for Periodic Operator's Inspection" is 1/reactor. In the voluntary inspection based on the special maintenance plan during long-term shutdown, the number of samples of No.5 "Work management" is

as in the long-term shutdown. (4) "Decommissioning B": Decommissioning approved with no spent fuel SFP. (5) "Decommissioning review" : Under review for decommissioning. The same inspection is performed as in the long-term shutdown. (6) "Decommissioning planned" : Planned to apply for decommissioning. The same inspection is performed as in the long-term shutdown. (7) "Construction A": In the construction phase with no new fuel delivered. (8) "Construction B": In the construction phase with new fuel delivered.	added by 1/reactor. *3: The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	Hamaoka	Shika	Tsuruga	Shimane	Shimane	(TEPCO) Higashidori
			Units 1, 2: Decommissioning B Units 3 to 5: Long-term shutdown	Units 1, 2: Long-term shutdown	Unit 1: Decommissioning A Unit 2: Long-term shutdown	Unit 1: Decommissioning A Unit 2: Long-term shutdown Unit 3: Construction B	Unit 1: Construction A	Unit 1: Construction A
1	BM0020	Oversight of operator's periodic inspection*2	2	*3	1	1	-	-
2	BM1040	Heat sink performance	1	1	1	1	-	-
3	BM0060	Maintenance effectiveness assessments	1	1	1	1	-	-
4	BM0100	Design control	2	1	2	2	-	-
5	BM0110	Work control	7	6	5	5	-	-
6	BO0010	Surveillance testing	5	4	4	4	-	-
7	BO1020	System configuration of equipment	5	4	4	4	-	-
8	BO1030	Reactor start-up and shutdown	0	0	0	0	-	-
9	BO1040	Operability determination and functionality assessments	5	4	4	4	-	-
10	BO0060	Nuclear fuel control (Transportation and storage)*3	1	2	1	1	-	-
11	BO1070	Capability of operating personnel	*3	*3	*3	*3	-	-
12	BE0010	Protection against natural disaster	2	2	2	2	-	-
13	BE0020	Fire protection	7	7	7	7	-	-
14	BE0030	Internal flood protection	1	1	1	1	-	-
15	BE0040	Maintaining of emergency response organization	1	1	1	1	-	-
16	BE0050	Emergency preparedness and maintenance	1	1	1	1	-	-
17	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	0	0	0	0	-	-
18	BE0090	Seismic protection	1	1	1	1	-	-
19	BE0100	Tsunami protection	1	1	1	1	-	-
20	BR0010	Radiation exposure control	3	3	3	3	-	-
21	BR0070	Radioactive solid waste management*3	3	3	3	3	-	-
22	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	-	-
23		Operation of Quality Management System (Semiannual)	2	2	2	2	-	-
24	BQ0040	Performance Indicator Verification	1	1	1	1	-	-
25	BQ0050	Initial response to occurrence of an event	*3	*3	*3	*3	-	-
Total			53	47	47	47	0	0

(Unit: Number of samples)

[Explanatory notes]

- (1) "Operation": In service in compliance with new completing response to new regulatory requirements.
- (2) "Long-term shutdown": Long-term shutdown, in preparation in compliance with new regulatory requirements.
- (3) "Decommissioning A": Decommissioning approved

*1: Set based on the status of reactors as of the end of FY 2023.

*2: The number of inspection samples for long-term shutdown and decommissioning A/B in No.1 "Supervision for Periodic Operator's Inspection" is 1/reactor. In the voluntary inspection based on the special maintenance plan during long-term shutdown,

- with spent fuel SFP. The same inspection is performed as in the long-term shutdown.
- (4) “Decommissioning B”: Decommissioning approved with no spent fuel SFP.
 - (5) “Decommissioning review” : Under review for decommissioning. The same inspection is performed as in the long-term shutdown.
 - (6) “Decommissioning planned” : Planned to apply for decommissioning. The same inspection is performed as in the long-term shutdown.
 - (7) “Construction A”: In the construction phase with no new fuel delivered.
 - (8) “Construction B”: In the construction phase with new fuel delivered.
- the number of samples of No.5 “Work management” is added by 1/reactor.
- *3: The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or application from the operator concerning the statutory verification action.

(Routine Inspection (Nuclear Fuel Cycle Facilities, etc.))

No.	Guide No.	Inspection guide name	JNFL					Rokkasho Safeguards Center	[Decommissioning] JAEA First Nuclear Powered Ship Reactor Facilities (no nuclear fuel materials in the plants, etc.)	Recyclable Fuel Storage Center
			Rokkasho Reprocessing Facility	MOX Fuel Fabrication Facility	Fuel fabrication facility	Waste storage facility	Waste disposal facility			
1	BM0020	Oversight of operator's periodic inspection	5		4	3			1	
2	BM1040	Heat sink performance								
3	BM0060	Maintenance effectiveness assessments	5		3	1	1	1	-	
4	BM0100	Design control	6		3	1	1	1		
5	BM0110	Work control	4		2	1	1	1	1	
6	BO0010	Surveillance testing	14		7	1		1	-	
7	BO1020	System configuration of equipment								
8	BO1030	Reactor start-up and shutdown								
9	BO1040	Operability determinations and functionality assessments								
10	BO0060	Nuclear fuel control (Transportation and storage)	2		1					
11	BO1070	Capability of operating personnel								
12	BO2010	Operation management	10		8	4	3	2		
13	BO2020	Critical safety management	10		4			1		
14	BO2030	Experiment								
15	BE0010	Protection against natural disaster	4		2	1	1	1	1	
16	BE0020	Fire protection	13		3	1	1	1	1	
17	BE0030	Internal flood protection	2		1	1	1	1	-	
18	BE0040	Maintaining of emergency response organization	1		1	1	1	1		
19	BE0050	Emergency preparedness and maintenance	1		1	1	1	1		
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	5		2					
21	BE0090	Seismic protection	4		2	1	1	1	-	
22	BE0100	Tsunami protection								
23	BR0010	Radiation exposure control	6		10	2	1	2	1	
24	BR0070	Radioactive solid waste management	3		2	1	1	1	1	
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26		Operation of Quality Management System (Semiannual)	2	1	2	1	1	1	1	1
27	BQ0040	Performance Indicator Verification	1	-	1	1	1	1	1	-
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			99	2	60	23	17	19	9	2

Unit: Number of samples

(Note 1): “-” in the table means that inspection is conducted as necessary.

(Note 2): “/” in the table means that there is no inspection target.

(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	Mitsubishi Nuclear Fuel	Tokai Works, Nuclear Fuel Industries	JAEA Nuclear Science Research Institute					
					Nuclear Science Research Institute	Waste disposal facility	(including radioactive waste processing site) JR-R-3	Static Experiment Critical Facility (STACY)	Nuclear Safety Research Reactor (NSRR)	[Decommissioning] Fast Critical Assembly (FCA) (no nuclear fuel materials in the core)
1	BM0020	Oversight of operator's periodic inspection	4	4			6	4	4	1
2	BM1040	Heat sink performance								
3	BM0060	Maintenance effectiveness assessments	2	3	1	-	2	1	1	1
4	BM0100	Design control	3	-	1	-	1	1	-	-
5	BM0110	Work control	2	4	1	2	6	2	2	-
6	BO0010	Surveillance testing	6	4	1		4	1	1	-
7	BO1020	System configuration of equipment								
8	BO1030	Reactor start-up and shutdown								
9	BO1040	Operability determinations and functionality assessments								
10	BO0060	Nuclear fuel control (Transportation and storage)	1	-	1		1	1	1	1
11	BO1070	Capability of operating personnel								
12	BO2010	Operation management	8	4	2	-	7	-	2	
13	BO2020	Critical safety management	4	2	1					
14	BO2030	Experiment					2	-	2	
15	BE0010	Protection against natural disaster	2	1	1	-	1	1	1	-
16	BE0020	Fire protection	3	2	1	-	4	1	1	-
17	BE0030	Internal flood protection	1	1	1	-	1	1	1	
18	BE0040	Maintaining of emergency response organization	1	1	1	-	1	1	1	
19	BE0050	Emergency preparedness and maintenance	1	1	1	-	1	-	-	
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	2	2						
21	BE0090	Seismic protection	2	2	1	-	2	1	1	-
22	BE0100	Tsunami protection			-					
23	BR0010	Radiation exposure control	10	4	2		5	2	2	1
24	BR0070	Radioactive solid waste management	2	2	1	-	2	1	1	1
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26		Operation of Quality Management System (Semiannual)	2	2	1	-	2	1	1	-
27	BQ0040	Performance Indicator Verification	1	1	1	-	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			58	41	20	3	50	21	24	7

Unit: Number of samples

(Note 1): “-” in the table means that inspection is conducted as necessary.

(Note 2): “/” in the table means that there is no inspection target.

(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	JAEA Nuclear Science Research Institute				JAEA Oarai Research and Development Institute			
			[Decommissioning] (no nuclear fuel materials in the plants, etc.) [Decommissioning] (no nuclear fuel materials in the plants, etc.)	[Decommissioning] (no nuclear fuel materials in the plants, etc.) [Decommissioning] (no nuclear fuel materials in the plants, etc.)	[Decommissioning] (no nuclear fuel materials in the plants, etc.) [Decommissioning] (no nuclear fuel materials in the plants, etc.)	[Decommissioning] (no nuclear fuel materials in the plants, etc.) [Decommissioning] (no nuclear fuel materials in the plants, etc.)	High Temperature Engineering Test Reactor (HTTR)	Experimental Fast Reactor (Joyo)	[Decommissioning] (no nuclear fuel materials in the core) [Decommissioning] (no nuclear fuel materials in the core) [Decommissioning] (no nuclear fuel materials in the core)	[Decommissioning] (no nuclear fuel materials in the core) [Decommissioning] (no nuclear fuel materials in the core)
1	BM0020	Oversight of operator's periodic inspection	1	1	1	1	4	4	1	1
2	BM1040	Heat sink performance	/	/	/	/	/	/	/	/
3	BM0060	Maintenance effectiveness assessments	1	1	1	1	2	1	1	1
4	BM0100	Design control	-	-	-	-	1	1	-	-
5	BM0110	Work control	-	-	-	-	2	1	-	-
6	BO0010	Surveillance testing	-	-	-	-	4	4	1	1
7	BO1020	System configuration of equipment	/	/	/	/	/	/	/	/
8	BO1030	Reactor start-up and shutdown	/	/	/	/	/	/	/	/
9	BO1040	Operability determinations and functionality assessments	/	/	/	/	/	/	/	/
10	BO0060	Nuclear fuel control (Transportation and storage)	/	/	1	/	1	1	1	1
11	BO1070	Capability of operating personnel	/	/	/	/	/	/	/	/
12	BO2010	Operation management	/	/	/	/	5	5	/	/
13	BO2020	Critical safety management	/	/	/	/	/	/	/	/
14	BO2030	Experiment	/	/	/	/	2	-	/	/
15	BE0010	Protection against natural disaster	-	-	-	-	1	1	/	/
16	BE0020	Fire protection	-	-	-	-	3	3	1	1
17	BE0030	Internal flood protection	/	/	/	/	1	1	/	/
18	BE0040	Maintaining of emergency response organization	/	/	/	/	1	1	/	/
19	BE0050	Emergency preparedness and maintenance	/	/	/	/	1	1	/	/
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	/	/	/	/	/	/	/	/
21	BE0090	Seismic protection	-	-	-	-	1	1	/	/
22	BE0100	Tsunami protection	/	/	/	/	/	/	/	/
23	BR0010	Radiation exposure control	1	1	1	1	5	5	1	2
24	BR0070	Radioactive solid waste management	1	1	1	1	2	2	1	2
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26		Operation of Quality Management System (Semiannual)	-	-	-	-	1	1	-	-
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			6	6	7	6	39	35	9	11

Unit: Number of samples

(Note 1): “-” in the table means that inspection is conducted as necessary.

(Note 2): “/” in the table means that there is no inspection target.

(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

(Note 4): There is no schedule for operation of Experimental Fast Reactor Facility (Joyo) in FY 2024.

No.	Guide No.	Inspection guide name	JAEA Oarai Research and Development Institute			JAEA Nuclear Fuel Cycle Engineering Laboratories		[Decommissioning] The University of Tokyo Nuclear Reactor "Yayoi" (no nuclear fuel materials in the core)	MHI Nuclear Development Corporation	Nippon Nuclear Fuel Development (NFD)
			JAEA Oarai Research and Development Institute (north)	JAEA Oarai Research and Development Institute (south)	Specified Radioactive Waste Interim Storage Facility	[Decommissioning] Tokai Reprocessing Facility	Nuclear Fuel Cycle Engineering Laboratories			
1	BM0020	Oversight of operator's periodic inspection	/	/	3	5	/	1	/	/
2	BM1040	Heat sink performance	/	/	/	/	/	/	/	/
3	BM0060	Maintenance effectiveness assessments	1	1	1	5	1	1	1	1
4	BM0100	Design control	1	1	1	4	1	-	1	1
5	BM0110	Work control	1	1	1	6	1	-	1	1
6	BO0010	Surveillance testing	1	1	1	8	1	-	1	1
7	BO1020	System configuration of equipment	/	/	/	/	/	/	/	/
8	BO1030	Reactor start-up and shutdown	/	/	/	/	/	/	/	/
9	BO1040	Operability determinations and functionality assessments	/	/	/	/	/	/	/	/
10	BO0060	Nuclear fuel control (Transportation and storage)	1	1	/	1	1	/	1	1
11	BO1070	Capability of operating personnel	/	/	/	/	/	/	/	/
12	BO2010	Operation management	2	2	3	5	2	/	2	2
13	BO2020	Critical safety management	1	1	1	5	1	/	1	1
14	BO2030	Experiment	/	/	/	/	/	/	/	/
15	BE0010	Protection against natural disaster	1	1	1	4	1	/	1	1
16	BE0020	Fire protection	1	1	1	7	1	1	1	1
17	BE0030	Internal flood protection	1	1	1	2	1	/	1	1
18	BE0040	Maintaining of emergency response organization	1	1	1	1	1	/	1	1
19	BE0050	Emergency preparedness and maintenance	1	1	1	1	1	/	1	1
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	/	/	/	3	/	/	/	/
21	BE0090	Seismic protection	1	1	1	4	1	/	1	1
22	BE0100	Tsunami protection	/	/	/	4	-	/	/	/
23	BR0010	Radiation exposure control	2	2	2	6	2	1	2	2
24	BR0070	Radioactive solid waste management	1	1	1	3	1	1	1	1
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26		Operation of Quality Management System (Semiannual)	1	1	1	2	1	1	1	1
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			20	20	23	78	20	8	20	20

Unit: Number of samples

(Note 1): “-” in the table means that inspection is conducted as necessary.

(Note 2): “/” in the table means that there is no inspection target.

(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	Tokai Safeguards Center	Toshiba Nuclear Engineering Laboratory	[Decommissioning] Toshiba Nuclear Critical Assembly (NCA)	[Decommissioning] (no nuclear fuel materials in the plants, etc.) Toshiba (TTR-1)	[Decommissioning] (no nuclear fuel materials in the plants, etc.) Atomic Energy Research Laboratory, Tokyo City University	[Decommissioning] (no nuclear fuel materials in the plants, etc.) Hitachi Training Reactor at Ozeji Center (HTR)	[Decommissioning] Institute for Atomic Energy, Rikkyo University (no nuclear fuel materials in the plants, etc.)	Global Nuclear Fuel-Japan Co., Ltd.
1	BM0020	Oversight of operator's periodic inspection	/	/	3	1	1	1	2	6
2	BM1040	Heat sink performance	/	/	/	/	/	/	/	/
3	BM0060	Maintenance effectiveness assessments	1	1	1	1	1	1	-	2
4	BM0100	Design control	1	-	1	-	/	/	-	-
5	BM0110	Work control	1	1	1	-	-	-	/	4
6	BO0010	Surveillance testing	1	1	/	/	/	/	/	4
7	BO1020	System configuration of equipment	/	/	/	/	/	/	/	/
8	BO1030	Reactor start-up and shutdown	/	/	/	/	/	/	/	/
9	BO1040	Operability determinations and functionality assessments	/	/	/	/	/	/	/	/
10	BO0060	Nuclear fuel control (Transportation and storage)	/	-	1	/	/	/	/	-
11	BO1070	Capability of operating personnel	/	/	/	/	/	/	/	/
12	BO2010	Operation management	2	1	/	/	/	/	/	4
13	BO2020	Critical safety management	1	1	/	/	/	/	/	2
14	BO2030	Experiment	/	/	/	/	/	/	/	/
15	BE0010	Protection against natural disaster	1	-	-	-	/	/	/	2
16	BE0020	Fire protection	1	1	1	1	/	/	1	4
17	BE0030	Internal flood protection	1	1	-	/	/	/	/	1
18	BE0040	Maintaining of emergency response organization	1	1	1	/	/	/	/	1
19	BE0050	Emergency preparedness and maintenance	1	1	1	/	/	/	/	1
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.	/	/	/	/	/	/	/	2
21	BE0090	Seismic protection	1	-	-	-	/	/	/	1
22	BE0100	Tsunami protection	/	/	/	/	/	/	/	/
23	BR0010	Radiation exposure control	2	1	1	1	1	1	-	4
24	BR0070	Radioactive solid waste management	1	1	1	1	1	1	1	2
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1	1
26		Operation of Quality Management System (Semiannual)	1	1	1	1	1	1	1	2
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-	-
Total			19	14	15	8	7	7	6	44

Unit: Number of samples

(Note 1): “-” in the table means that inspection is conducted as necessary.

(Note 2): “/” in the table means that there is no inspection target.

(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

No.	Guide No.	Inspection guide name	[Decommissioning]	[Decommissioning]	Kumatori Works, Nuclear Fuel Industries	Kyoto University	Atomic Energy Research Institute, Kindai University (UTR)	Ningyo-toge Environmental Engineering Center, JA EA	[Decommissioning]
			[Decommissioning] (Prototype Advanced Thermal Reactor (FUGEN) (no nuclear fuel materials in the core))	[Decommissioning] (Prototype Fast Breeder Reactor (MONJU) (no nuclear fuel materials in the core))		Kyoto University Research Reactor, Institute for Integrated Radiation and Nuclear Science Kyoto University Critical Assembly (KUCA), Institute for Integrated Radiation and Nuclear Science			[Decommissioning] (Ningyo-toge Environmental Engineering Center, JA EA (Contains nuclear fuel materials in the plants, etc.))
1	BM0020	Oversight of operator's periodic inspection	1	1	4	4	4		2
2	BM1040	Heat sink performance		1					
3	BM0060	Maintenance effectiveness assessments	2	2	3	2	3	1	1
4	BM0100	Design control	1	1	3	-	1	-	-
5	BM0110	Work control	4	4	2	1	4	1	2
6	BO0010	Surveillance testing	-	-	7	1	4	1	2
7	BO1020	System configuration of equipment	1	1					
8	BO1030	Reactor start-up and shutdown							
9	BO1040	Operability determinations and functionality assessments	1	1					
10	BO0060	Nuclear fuel control (Transportation and storage)	-	1	1	-	1	1	1
11	BO1070	Capability of operating personnel		1					
12	BO2010	Operation management			8	-	5	2	1
13	BO2020	Critical safety management			4				1
14	BO2030	Experiment				-	2	2	
15	BE0010	Protection against natural disaster	1	1	2	1	2	1	1
16	BE0020	Fire protection	2	5	3	2	3	1	1
17	BE0030	Internal flood protection	1	1	1	1	1	-	1
18	BE0040	Maintaining of emergency response organization	1	1	1	1	1	1	1
19	BE0050	Emergency preparedness and maintenance	1	1	1	1	1	1	1
20	BE0060	Maintaining personal capacity to respond to severe accidents, etc.		2	2				
21	BE0090	Seismic protection	1	1	2	1	1	1	1
22	BE0100	Tsunami protection		-					
23	BR0010	Radiation exposure control	4	3	10	2	4	2	1
24	BR0070	Radioactive solid waste management	2	4	2	1	4	1	1
25	BQ0010	Operation of Quality Management System (Routine)	1	1	1	1	1	1	1
26	BQ0010	Operation of Quality Management System (Semiannual)	2	2	2	1	2	1	1
27	BQ0040	Performance Indicator Verification	1	1	1	1	1	1	1
28	BQ0050	Initial response to occurrence of an event	-	-	-	-	-	-	-
Total			27	36	60	21	45	23	21

Unit: Number of samples

(Note 1): “-” in the table means that inspection is conducted as necessary.

(Note 2): “/” in the table means that there is no inspection target.

(Note 3): The number of samples may be increased or decreased at the discretion of the head of the regulatory office or the head of the team, in coordination with the overseeing department in charge, according to the condition of the facility or the application from the operator concerning the statutory verification action.

(Routine Inspection (Physical Protection of Nuclear Material))

FY 2024 Routine Inspection Plan (Physical Protection of Nuclear Material)																				
Commercial Power Reactor, Reprocessing Facility																				
No.	Guide No.	Inspection guide name	Number of samples*1																	
			Reactors in operation						Reactors under long-term shutdown/decommissioning (under construction)											
			Mihama	Ohi	Takahama	Ikata	Genkai	Sendai	Tomari	Higashidori	Onagawa	Kashiwazaki-Kariwa	Fukushima Daiichi	Fukushima Daini	Tokai Daini	Hamaoka	Shika	Tsuruga	Shimane	Reprocessing JNFL
1	PP1101	Management of specified nuclear fuel materials	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2
2	PP1102	Continuous monitoring of specified nuclear fuel materials	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	PP1103	Locking of entrances/exits and installation of detection devices for specified nuclear fuel material management	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	PP1104	Implementation and reporting of inspections of specified nuclear fuel materials, facilities, and devices	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5	PP1301	Personnel access to protected areas, etc. (Issuance of certificates, etc. to regular entrants)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	PP1302	Personnel access to protected areas, etc. (Issuance of certificates, etc. to temporary entrants)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	PP1303	Checking of trustworthiness of individuals	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
8	PP1401	Personnel access to protected areas, etc. (Supervision of temporary entrants)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
9	PP1402	Vehicle access to protected areas	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10	PP1403	Vehicle access to peripheral protected areas and restricted access areas	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

11	PP1404	Establishment of parking lots in protected areas, etc.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12	PP1405	Vehicles requiring parking in particular outside parking lots	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
13	PP1406	Measures to be taken at entrances and exits of protected areas, etc. (Inspection by visual check, etc.)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
14	PP1407	Measures to be taken at entrances and exits of protected areas (Inspection by metal detector, nuclear material detector, etc.)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
15	PP1408	Measures to be taken at entrances and exits of protected areas, etc. (Continuous monitoring of entrances and exits)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
16	PP1409	Supervision of temporary entrants in shutdown device installation area outside central control rooms (excluding processing (Category I), storage and reprocessing facilities)	2	2	2	2	2	2	0	0	0	0	—	—	0	0	0	0	0
17	PP1410	Supervision of temporary entrants in critical facility installation areas outside protected areas (excluding processing (Category I) and storage facilities)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
18	PP1411	Supervision of temporary entrants at guard stations	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	PP1412	Supervision of temporary entrants at monitoring stations	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	PP1503	Establishment of peripheral protection area (barriers such as fences for peripheral protection area)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

21	PP1504	Establishment of peripheral protection area (facilities or devices capable of detecting human intrusion)	2	2	2	2	2	2	2	2	2	4	2	2	2	2	2	2	2	2
22	PP1505	Establishment of restricted access area (barriers such as fences for restricted access area)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
23	PP1506	Establishment of restricted access area (signs and sirens, megaphones or other facilities or devices for warning people)	2	2	2	2	2	2	2	2	2	2 *3	2	2	2	2	2	2	2	2
24	PP1507	Establishment of restricted access area (facilities or devices capable of detecting human intrusion)	2	2	2	2	2	2	2	2	2	4	2	2	2	2	2	2	2	2
25	PP1508	Patrols of protected areas, etc.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
26	PP1511	Installation of monitoring devices	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
27	PP1514	Management of keys at entrances and exits	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
28	PP1520	Work or patrols inside fences, etc. surrounding critical facilities subject to fire protection inside protected areas (excluding processing (Category I) and storage facilities)	2	2	2	2	2	2	0	0	0	0	-	-	0	0	0	0	0	2
29	PP1522	Work or patrols inside barriers for critical facilities subject to fire protection outside protected areas (excluding processing (Category I) and storage facilities)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
30	PP1524	Work or patrols inside protected areas where special facilities for severe accident management are installed (Processing (Category I), storage and reprocessing facilities are excluded)	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-

31	PP1526	Inspection and maintenance of protective facilities	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
32	PP1527	Guard stations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33	PP1528	Means of communication at guard stations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	PP1529	Monitoring stations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	PP1530	Means of communication at monitoring stations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	PP1531	Implementation of performance tests and effective assessment of the entire system for physical protection of nuclear material	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
37	PP1801	Education and training	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total			84	84	84	84	84	84	77	77	77	81	77	77	77	77	77	77	80

*1: Set based on the facility status at the end of FY 2023.

*2: To be implemented as physical protection inspections based on the implementation plan.

*3: “Monitoring in stormy weather,” a key item based on supplemental inspections, should be confirmed based on the relevant inspection guide while “Status of PPCAP” and “Activities of the Monitoring Room” should be confirmed through routine patrols. For these items, inspection results should be compiled quarterly.

(Note) The number of samples may be increased or decreased in coordination with the nuclear safety department according to the condition of the facility. Note that “-” indicates facilities with no inspection targets, while “0” indicates facilities excluded from inspection due to long-term shutdown.

Processing (Category III: Kumatori Office, Nuclear Fuel Industries)			
No.	Guide No.	Inspection guide name	Number of samples
			Facilities in operation
1	PP3101	Management of specified nuclear fuel materials	2
2	PP3102	Locking of entrances/exits and installation of detection devices for specified nuclear fuel material management	2
3	PP3103	Implementation and reporting of inspections of specified nuclear fuel materials, facilities, and devices	2
4	PP3301	Personnel access to protected areas (Issuance of certificates, etc. to regular entrants)	4
5	PP3302	Personnel access to protected areas (Issuance of certificates, etc. to temporary entrants)	2
6	PP3401	Vehicle access to protected areas	2
7	PP3402	Establishment of parking lots in protected areas	2
8	PP3403	Vehicles requiring parking in particular outside parking lots	2
9	PP3404	Measures to be taken at entrances and exits of protected areas	4
10	PP3405	Measures to be taken at entrances and exits of protected areas, etc. (Continuous monitoring of entrances and exits)	4
11	PP3502	Establishment of restricted access area (barriers such as fences for restricted access area)	4
12	PP3503	Patrols of protected areas	2
13	PP3504	Installation of monitoring devices	2
14	PP3506	Inspection and maintenance of protective facilities	4
15	PP3507	Communication for protection (means of communication)	1
16	PP3508	Implementation of performance tests and effective assessment of the entire system for physical protection of nuclear material	2
17	PP3801	Education and training	2
Total			43

(Team Inspection)

No.	Guide No.	Inspection guide name	FY 2024				FY 2025		Remarks
			The first quarter	Second quarter	Third quarter	The 4th Quarter	The first quarter	Second quarter	
1	BM0010	Oversight of pre-service operator inspection	(Inspection is conducted according to the operator's pre-service operator inspection plan.)						
2	BM1050	Oversight of in-service inspection	(Inspection is conducted according to the operator's periodic operator inspection plan)						
3	BM0100	Design control	Genkai*3	Mihama	Takahama JAEA Reprocessing			Ohi	
4	BO1050	Safety of replaced core	(Inspection is conducted according to the operator's periodic operator inspection plan)						
5	BO1070	Capability of operating personnel	(Inspection is conducted based on the operator's drill plan)						
6	BE0021	Fire protection (Triennial)	Genkai*3	Mihama	Takahama			Ohi	
7	BE0070	Evaluation of training for personnel to respond to severe accidents, etc.	(Inspection is conducted based on the operator's drill plan)						
8	BE0080	Evaluation of scenario for drills for severe accidents, etc.	(Inspection is conducted based on the operator's drill plan)						
9	BR0020	Radiation exposure evaluation and personal monitoring	Tokai, Tokai Daini Genkai	Tomari JAEA Reprocessing	Fukushima Daini Sendai	Tsuruga Kashiwazaki- Kariwa	Onagawa Ikata	JNFL Reprocessing Ohi Tohoku Higashidori	
10	BR0030	ALARA activities for radiation exposure control	Tokai, Tokai Daini Genkai	Tomari JAEA Reprocessing	Fukushima Daini Sendai	Tsuruga Kashiwazaki- Kariwa	Onagawa Ikata	JNFL Reprocessing Ohi Tohoku Higashidori	
11	BR0040	Management and reduction of airborne radioactive substances	Tokai, Tokai Daini Genkai	Tomari JAEA Reprocessing	Fukushima Daini Sendai	Tsuruga Kashiwazaki- Kariwa	Onagawa Ikata	JNFL Reprocessing Ohi Tohoku Higashidori	
12	BR0050	Radioactive gas/liquid waste management	Ikata Tokai, Tokai Daini	Tomari Mihama JAEA Reprocessing	Fukushima Daini Ohi	Tsuruga Kashiwazaki- Kariwa Takahama	Onagawa Genkai	JNFL Reprocessing Tohoku Higashidori	
13	BR0080	Radiation environment monitoring program	Ikata Tokai, Tokai Daini	Tomari Mihama JAEA Reprocessing	Fukushima Daini Ohi	Tsuruga Kashiwazaki- Kariwa Takahama	Onagawa Genkai	JNFL Reprocessing Tohoku Higashidori	
14	BR0090	Radiation monitoring equipment	Ikata Tokai, Tokai Daini	Tomari Mihama JAEA Reprocessing	Fukushima Daini Ohi	Tsuruga Kashiwazaki- Kariwa Takahama	Onagawa Genkai	JNFL Reprocessing Tohoku Higashidori	
15	BQ0010	Operation of quality management system*1	Ohi Sendai Onagawa	Tohoku Higashidori Tomari Takahama Tsuruga	Mihama JNFL Reprocessing Tokai Daini Shimane	Genkai Kashiwazaki- Kariwa Ikata	Ohi Sendai Hamaoka	Takahama Ikata Shika	

16	Physical protection of nuclear material	Physical protection	Tomari NMCC Rokkasho Mitsubishi Nuclear Fuel JAEA Oarai JAEA Nuclear Science Research Institute Kashiwazaki- Kariwa *2 FUGEN Mitsubishi Electric	JNFL Waste JNFL MOX Ohma Tokai Daini Tokai Office, Nuclear NFD MHI Toshiba Shika Tsuruga Takahama MONJU Kyoto University Sendai	Tohoku Higashidori JNFL Reprocessing JNFL concentration and burial RFS Onagawa Fukushima Daini JAEA Reprocessing JAEA Nuclear Fuel Cycle Engineering Laboratories NMCC Tokai Hamaoka Ohi Mihama Kindai University Kumatori Office, Nuclear Fuel Industries Ningyotoge Shimane Ikata Genkai	JAEA Oarai JAEA Nuclear Science Research Institute GNF-J	Tomari NMCC Rokkasho Mitsubishi Nuclear Fuel JAEA Oarai JAEA Nuclear Science Research Institute Kashiwazaki- Kariwa FUGEN Mitsubishi Electric	JNFL Waste JNFL MOX Ohma Tokai Daini Tokai Office, Nuclear NFD MHI Toshiba Shika Tsuruga Takahama MONJU Kyoto University Sendai	
		Information system protection	Tomari JNFL concentration and burial Tokai Office, Nuclear JAEA Nuclear Science Research Institute Mihama MONJU Shimane Ikata Genkai	Tohoku Higashidori Onagawa Tokai Daini Mitsubishi Nuclear Fuel Shika Tsuruga Ohi	Tomari Tohoku Higashidori NFD Toshiba Ningyotoge Sendai	JNFL Reprocessing Onagawa Fukushima Daini Tokai Daini Hamaoka Kashiwazaki- Kariwa Shika Ohi Takahama Genkai	Tomari JNFL concentration and burial Tokai Office, Nuclear JAEA Nuclear Science Research Institute Mihama MONJU Shimane Ikata Genkai	Tohoku Higashidori Onagawa Tokai Daini Mitsubishi Nuclear Fuel Shika Tsuruga Ohi	

*Among inspection items, “annual inspection” shall be implemented by team inspection.

(Facilities, etc. Not Subject to Article 41 of the Cabinet Order of the Reactor Regulation Act)

Place			Inspection (usage survey) FY	Implementation period (scheduled)
No.	Location	Name		
1	Miyagi	Tohoku University Research Center for Accelerator and Radioisotope Science (RARiS) Aobayama site	FY 2014	The first quarter
2	Miyagi	Tohoku University Institute of Multidisciplinary Research for Advanced Materials	FY 2014	The first quarter
3	Ibaraki	Mito Institute, Kaken Co., Ltd.	FY 2015	The Third quarter
4	Tochigi	Canon Electron Tubes & Devices Co., Ltd.	FY 2014	The Second quarter
5	Saitama	Saitama Property Management Office, Mitsubishi Materials Corporation	FY 2016	The 4th Quarter
6	Saitama	RIKEN Wako Campus	FY 2014	The Second quarter
7	Saitama	R&D Center, Mitsui Kinzoku Co., Ltd.	—	The Third quarter
8	Tokyo	JEOL Ltd.	FY 2015	The first quarter
9	Tokyo	Kyoundo Hospital, SASAKI INSTITUTE	FY 2014	The Second quarter
10	Kanagawa	Aoyama Gakuin University Sagami-hara Campus	FY 2014	The first quarter
11	Kanagawa	OHARA INC. [Nuclear fuel materials, nuclear source materials]	FY 2017	The Third quarter
12	Ishikawa	Radioisotope Laboratory for Natural Science and Technology, Research Center for Experimental Modeling of Human Disease, Kanazawa University	FY 2016	The Second quarter
13	Fukui	Japan Atomic Energy Agency Prototype Advanced Thermal Reactor FUGEN	FY 2007	The first quarter
14	Fukui	Tsuruga Power Station, Japan Atomic Power Company	FY 2006	The Third quarter
15	Yamanashi	Center for Life Science Research, University of Yamanashi	FY 2016	The 4th Quarter
16	Shizuoka	Faculty of Engineering, Shizuoka University	FY 2014	The first quarter
17	Kyoto	Safety, Health and Environmental Management Division, GS Yuasa International Ltd.	FY 2014	The Third quarter
18	Osaka	Japan Mint Research Institute	FY 2016	The Third quarter
19	Hyogo	Konan University Building 11 Measurement and Management Facility	FY 2013	The 4th Quarter
20	Hyogo	Himeji Plant, NIPPON SHOKUBAI CO., LTD.	FY 2013	The 4th Quarter
21*1	Hyogo	Harima SR-RI Laboratory, JAEA	—	The 4th Quarter
22	Tottori	Institute for Planetary Materials, Okayama University	FY 2015	The Second quarter
23	Yamaguchi	Iwakuni-Otake Works, Mitsui Chemicals, Inc.	FY 2012	The Second quarter
24	Fukuoka	Omuta Works, Mitsui Chemicals, Inc.	FY 2013	The Third quarter
25	Kagoshima	Sendai Nuclear Power Station, Kyushu Electric Power Company.	FY 2006	The Second quarter

(Note) The scheduled implementation period may be moved to a different quarter as a result of schedule adjustments.

*1: Carried over from the FY 2023 plan (due to delay in sample delivery)

(4) Inspection Findings in FY 2024 (up to the 3rd Quarter)

(Nuclear Facility Safety and Radiation Safety)

		Subject	Overview	Significance and Severity Levels
The first quarter	1	Unit 2 of Onagawa NPS: Failure to secure access route, etc. due to non-implementation of impact assessment on access route, etc. caused by installation of temporary structures	On June 4, 2024, at Unit 2 of Onagawa NPS undergoing periodic inspection, safety inspectors conducted a plant walkdown of the access route and storage location of portable SA facilities (hereinafter “access route, etc.”) to check the scenario for drills concerning severe accidents, etc. and large-scale damage response that must be conducted before the start of application of the operational safety program for the Facility for Severe Accident Management, etc. In this walkdown, they observed that construction work was underway near the access route and multiple temporary structures associated with the construction had been installed, and that part of the access route had been changed. As a result of confirmation with the operator, it was confirmed that no impact assessment had been conducted regarding the access route based on the approved design and construction plan before the installation of temporary structures and the change to the access route. In response to questions from the safety inspectors, the operator conducted an impact assessment and found that, assuming the design basis for tremors, the temporary structures would collapse, making it impossible to secure part of the access route.	Green No SLV evaluation
Second quarter	2	Unit 2 of Onagawa NPS: Failure to connect water supply hoses, which are classed as a Facility for Severe Accident Management, etc., during on-site sequence training and large-scale damage drills due to insufficient competency assignment	On August 15 and from August 20 to 22, 2024, in feasibility confirmation training for severe accidents and large-scale damage response drills that must be conducted before the start of application of the operational safety program for the Facility for Severe Accident Management, etc. (hereinafter “SA Facility”) at Unit 2 of Onagawa NPS that was shutdown, the operator and safety inspectors confirmed that personnel to respond to severe accidents, etc. were unable to connect water supply hoses, which are classed as a SA facility, due to insufficient competency assignment in two training procedures concerning the securing of alternative water supply and the suppression of radioactive substance dispersion.	Green SL IV
Third quarter	3	Unit 3 of Genkai NPS: Inadequate consideration of measures to reduce radiation exposure during entry into	On July 31, 2024, at Unit 3 of Genkai NPS in operation, it was confirmed that two patrol persons (operating personnel) who conducted an on-site inspection in response to a “fire alarm panel failure” alarm triggered inside the reactor containment vessel (high-dose area) were exposed to external radiation doses of 0.36 mSv and 0.37 mSv, respectively, exceeding the planned dose of 0.2 mSv.	Green SL IV

	Subject	Overview	Significance and Severity Levels
	controlled areas (high-dose areas) when a fire alarm is triggered	At Unit 3 of Genkai NPS, in accordance with the “Genkai NPS Radiation Management Guidelines (Units 3 and 4)”, personnel entering controlled areas from the access control room must wear an alarm pocket dosimeter (hereinafter “APD”) and a glass badge, and complete entry procedures at the entry management device before entering. On the other hand, there is a separate internal document titled “Notice for Entry into Controlled Areas When a Fire Alarm Is Triggered” (hereinafter “the document”), stating that entrants must wear pocket dosimeters with no alarm function (hereinafter “PD”) deployed in the central control room, instead of the APD deployed in the access control room that they normally wear, in order to promptly identify the fire location and extinguish the fire at the initial stage. In this on-site inspection, in accordance with the document, the patrol persons wearing PD entered the reactor containment vessel (high-dose area) that was in operation from the access control room. However, they chose to wear PD in the high-dose area despite having access to the APD at the access control room, which is more effective for exposure reduction compared to PD. This indicates that consideration for exposure reduction was inadequate.	
4	Unit 3 of Genkai NPS: Inadequate radiation protection measures for the scattering of water containing radioactive substances from the primary system during the removal of the pressurizer safety valve	In the radiation team inspection started on June 4, 2024, the radiation team confirmed a record related to an incident where water containing radioactive substances from the primary system (hereinafter “primary system water”) was dispersed multiple times into the work area during the inspection of the pressurizer safety valve conducted on November 13, 2023, at Unit 3 undergoing periodic inspection. The fact was that when the first incident of dispersed primary system water occurred during the removal of the pressurizer safety valve, no instruction was given regarding the implementation of special measures in the controlled area based on the operational safety program. Consequently, no plan was established to wear equipment, such as full-face masks, based on the assumption of possible exposure to water. Furthermore, because the instruction to suspend inspection work on all three safety valves was not clearly communicated, the inspection work resumed on the remaining valves. As a result, primary system water was dispersed outside the system twice, causing radioactive substances to adhere to the workers.	Green SL IV

		Subject	Overview	Significance and Severity Levels
	5	Unit 3 of Mihama PS: Thinning of seawater system return piping for primary system cooling water cooler due to improper maintenance	On October 5, 2024, at Unit 3 of Mihama PS during operation, operating personnel observed precipitation of salt on the seawater system return header pipe of the primary system cooling water cooler. As a result of an inspection conducted on October 10, it was confirmed that there were micropores at the location and pipe wall thinning in the surrounding area. Accordingly, the operator determined that the condition did not conform to the NRA Ordinance Prescribing Technical Standards for Commercial Power Reactors and Their Auxiliary Facilities and decided not to use the primary coolant water cooler for investigation purposes. Subsequently, the plant was shut down on October 15 to restore the affected area. The investigation concluded that the wall thinning in the piping resulted from the adoption of an inner lining with low resistance to erosion caused by cavitation during the repair at the previous periodic inspection, without adequately considering the operating environment.	Green SL IV

(Physical Protection of Nuclear Material)

		Subject	Overview	Significance and Severity Levels
The first quarter	1	Case of physical protection of nuclear material at Takahama PS, The Kansai Electric Power Company, Inc. (physical protection of nuclear material)	Detection of unauthorized entry was difficult at part of the boundary of the restricted access area.	Green SL IV
Second quarter	2	Case of physical protection of nuclear material at Fukushima Daini NPS, TEPCO (physical protection)	Work on critical facilities subject to protection outside protected areas was not conducted by two or more persons simultaneously.	Green SL IV
	3	Case of physical protection of nuclear material at Kashiwazaki-Kariwa of TEPCO (physical protection)	Inspection was not conducted at entrances and exits of the protected areas for items that could be used for sabotage.	Green SL IV

	4	Case of physical protection of nuclear material at Tsuruga NPS, Japan Atomic Power Co. (physical protection)	Inspection was not conducted at entrances and exits of the protected areas for items that could be used for sabotage.	Green SL IV

(Evaluation of Severity Level Only)

		Subject	Severity Level
The first quarter	1	Non-implementation of inspection and improper preparation of inspection records concerning individual calibration of negative pressure alarm instruments for cells due to inadequate operational management, etc., at Nippon Nuclear Fuel Development Co., Ltd.	SL III

4. Status of Application and Approval/Permission for Review of Nuclear Fuel Cycle Facilities, etc.

(April 1, 2024, to March 31, 2025)

Applicant	Facility	Application Date	Review Meeting (times)	On-site investigation (times)	Date of permission or approval
Japan Nuclear Fuel Ltd.	Reprocessing plant	Design and construction plan December 26, 2022* ¹ Change in design and construction plan December 26, 2022* ² December 26, 2022* ³ December 26, 2022* ⁴ Change in operational safety program (addition of regulations concerning the 3S joint session) April 15, 2024	10	2	Approval of Change in Safety Requirements June 28, 2024
	MOX fuel fabrication plant	Design and construction plan (The 1st/3 times in total) February 28, 2023 Change in design and construction plan (The 2nd/4 times in total) February 28, 2023 Change in operational safety program (addition of regulations concerning the 3S joint session) April 15, 2024	7	2	Approval of Design and Construction Plans March 25, 2025 Approval of change in design and construction plan March 25, 2025 Approval of Change in Safety Requirements June 28, 2024
	Uranium enrichment plant	Design and construction plan (renewal of centrifuges, etc.) April 9, 2024 Change in operational safety program (addition of regulations concerning the 3S joint session, etc.) April 15, 2024 (change due to expansion of waste building, etc.) February 7, 2025	1	—	Approval of Design and Construction Plans August 19, 2024 Approval of Change in Safety Requirements June 28, 2024 March 21, 2025
	Waste storage facility	Design and construction plan December 26, 2022 Change in operational safety program (addition of regulations concerning the 3S joint session) April 15, 2024 (update of policies for long-term facility management) February 7, 2025	10	—	Approval of Change in Safety Requirements June 28, 2024 March 21, 2025

Recyclable-Fuel Storage Co.	Spent fuel storage facility	Design and construction plan (addition of casks for PWR that received type certification) October 7, 2024 (addition of casks for BWR that received type certification) October 7, 2024 Change in operational safety program (Restrictions on the number of units accepted at receiving facilities, etc.) January 15, 2025	1	—	Approval of Design and Construction Plans December 23, 2024 December 23, 2024 Approval of Change in Safety Requirements February 14, 2025
Mitsubishi Nuclear Fuel Co., Ltd.	Uranium fuel fabrication facility	Change in operation (addition of descriptions concerning work process for carrying out cleaning residue, etc.) May 10, 2024 Design and construction plan (Renewal of dust chamber, etc.) May 22, 2024 (Renewal of fuel rod line conveyor) December 9, 2024 Change in operational safety program (Reflection of change in storage and disposal capacity, etc.) January 8, 2025	4	—	Permission of change in operation September 26, 2024 Approval of Design and Construction Plans August 28, 2024 February 26, 2025 Approval of Change in Safety Requirements March 21, 2025
Japan Atomic Energy Agency	Waste storage facility	Design and construction plan (The 5th/5 times in total) April 28, 2022 Change in operational safety program March 14, 2014 (change in organizational reform, etc.) March 29, 2024	4	—	Approval of Design and Construction Plans February 12, 2025 Approval of Change in Safety Requirements October 1, 2024
	HTTR (High Temperature Engineering Test Reactor)	Change in basic design (Establishment of new heat utilization test facility, etc.) March 27, 2025 Design and construction plan (Update of rotation controller for primary helium gas circulator) October 31, 2023 (the standard response spectrum) December 20, 2024	1	—	Approval of Design and Construction Plans May 17, 2024
	Radioactive waste treatment facility of Nuclear Science Research Institute	Design and construction plan (The 9th/9 times in total) March 24, 2023 Change in operational safety program (change due to suspension of use of asphalt solidification device, etc.) December 12, 2023 (addition of policy for Long-Term Facility Management, etc.)	3	—	Approval of Design and Construction Plans December 5, 2024 Approval of Change in Safety Requirements May 27, 2024

	October 31, 2024			January 27, 2025
Waste disposal facility, Nuclear Science Research Institute	Change in operational safety program (change due to review of designated person for commissioners, etc. of the Committee on Examination of Reactor Safety of Nuclear Reactor Facilities, etc.) December 12, 2023 (change in organizational reform, etc.) March 29, 2024	2	—	Approval of Change in Safety Requirements May 29, 2024 October 1, 2024
Experimental Fast Reactor Facility	Change in basic design (addition of purpose of use and experimental device for RI production) February 7, 2024 Design and construction plan (The 2nd/2 times in total) January 6, 2025 (partial remodel of primary argon gas system piping) November 22, 2023 Change in operational safety program March 30, 2017 (addition of policy for Long- Term Facility Management) February 28, 2025	3	—	permission of (changes in) basic design October 22, 2024 Approval of Design and Construction Plans April 24, 2024
JRR-3 reactor facility	Change in operational safety program (addition of policy for Long- Term Facility Management) October 31, 2024	3	—	Approval of Change in Safety Requirements March 18, 2025
Nuclear Science Research Institute reactor facility (entire facility)	Change in basic design (Change in the peripheral monitoring area and site boundary, etc.) February 14, 2025 Change in operational safety program (change concerning organizational reform, etc.) March 29, 2024	2	—	Approval of Change in Safety Requirements October 1, 2024
Oarai Nuclear Engineering Institute (North Area) reactor facility (entire facility)	Change in operational safety program (change concerning organizational reform, etc.) March 29, 2024 (Review of descriptions of management methods for non-radioactive waste, etc.) December 23, 2024	2	—	Approval of Change in Safety Requirements October 1, 2024 March 24, 2025
Oarai Nuclear Engineering Institute (South)	Change in operational safety program (change concerning organizational reform, etc.) March 29, 2024	2	—	Approval of Change in Safety Requirements October 1, 2024

	Area) reactor facility (entire facility)	(Review of descriptions of management methods for non- radioactive waste) December 18, 2024			March 24, 2025
Nuclear Fuel Industries, Ltd. Co., Ltd.	Uranium fuel fabrication facility (Tokai Works)	Design and construction plan (The 5th/8 times in total) January 17, 2025	1	—	Approval of Design and Construction Plans March 19, 2025
	Uranium fuel fabrication facility (Kumatori Works)	—	—	—	—
Global Nuclear Fuel Japan Co., Ltd.	Uranium fuel fabrication facility	—	—	—	—
Kyoto University	KUCA (Kyoto University Critical Assembly)	Design and construction plan (upgrading of fuel storage shelves and manufacturing thorium storage shed) November 29, 2023	1	—	Approval of design and construction plan May 17, 2024
		Change in operational safety program (addition of quantitative restrictions of fuel elements of KUCA low enriched uranium, etc.) December 8, 2023			Approval of change in operational safety program June 12, 2024
Kindai University	UTR- KINKI (Kindai University Reactor)	Design and construction plan (partial amendment to measurement control system facilities) July 26, 2023 Change in operational safety program (addition of policy for Long- Term Facility Management) July 31, 2024	2	—	Approval of Design and Construction Plans August 21, 2024 Approval of change in operational safety program December 24, 2024
Japan Atomic Power Compan y	Tokai storage facility for low level waste	Operation permission July 16, 2015	4	—	—
Mitsubis hi Heavy Industrie s, Ltd.		Type certification for specific containers, etc. related to spent fuel storage facilities October 29, 2024	1	—	Type certification December 25, 2024

- Excluding facilities whose decommissioning plan was approved and ones for which their operators publicized their decommission.
 - There is no facility that received designation or approval of the business of refining facility or Category 1 waste disposal facility as of March 31, 2025.
 - The numbers of review meetings and on-site investigations represent the number held in FY 2024.
 - Several applications may be reviewed at one session of the review meeting.
 - The number of on-site investigations implemented by the Commissioners of the NRA is mentioned, and those implemented only by the staff of the secretariat of the NRA is excluded.
- *1: The application for a design and construction plan based on the enforcement of the new regulatory requirements, during the current status of the in-service phase when it is after the design and construction plan has been approved prior to the enforcement of the new regulatory requirements.
- *2: The application for change in the design and construction plan based on the enforcement of the new regulatory requirements,

during the current status of the inspection phase, when it is after design and construction plan has been approved prior to the enforcement of the new regulatory requirements (for the second time/twice in total) (*except for facilities related to the safety cooling water; B cooling tower, utility building No. 2, and construction to separate the offshore discharge pipes).

*3: The application for change in design and construction plan based on the enforcement of the new regulatory requirements, during the current status of the inspection phase, when it is after the design and construction plan has been approved prior to the enforcement of the new regulatory requirements (facilities related to the utility building No. 2).

*4: The application for change in design and construction plan based on the enforcement of the new regulatory requirements, during the current status of the inspection phase, when it is after the design and construction plan has been approved prior to the enforcement of the new regulatory requirements (construction to separate the offshore discharge pipes).

5. Numbers of Reviews and Checks of Nuclear Facilities

(April 1, 2024, to March 31, 2025)

(i) Status of Reviews and Checks of Commercial Power Reactor

Type of Facility		No. of Cases
Commercial Power Reactors (60 plants) (Under decommissioning procedures: 18 plants) (Specified nuclear facility: 6 plants)	Permission of changes in basic design	5
	Notification of changes in basic design	15
	Approval of Design and Construction Plans	24
	Approval of change in design and construction plan	2
	Notification of design and construction plan	5
	Notification of minor change in design and construction plan	2
	Extension of review period concerning the notification of design and construction plan	1
	Pass in pre-service inspection	10
	Approval of operational safety program or approval of their change	23
	Pre-service check	44
	Notification of evaluation, etc. for safety improvement	8
	Approval of extension of the operation period	2
	Approval of Long-Term Facility Management Plan	11
	Approval of change in decommissioning plan	3
	Notification of minor change in decommissioning plan	2
	Check of method and implementation system for determining assignment of responsible facility operator	10
	Approval of trial use of reactor	8
	Approval of partial use	11
	Instruction of omission of pre-service inspection	0
	Approval of type certification or change of specific dual-use casks	0
	Approval of designation or change of type of specific dual- use casks	0
Commercial power reactors in the research and development phase (Under decommissioning procedures: 2 facilities)	Permission of changes in basic design	0
	Notification of changes in basic design	0
	Approval of change in operational safety program	4
	Approval of change in decommissioning plan	2
	Notification of minor change in decommissioning plan	1

(ii) Status of Reviews and Checks of Nuclear Fuel Cycle Facilities, etc.

Type of Facility		No. of Cases
Fuel fabrication facility (7 facilities) (Under construction: 1 facility) (Under decommissioning procedures: 1 facilities)	Permission of change in operation	1
	Approval of design and construction plan or approval of their change	6
	Pass in pre-service inspection	0
	Issuance of pre-use confirmation certificate	2
	Permission of partial use	0
	Approval of change in operational safety program	1
	Approval of decommissioning plan or approval of change	0
Research reactor facility (22 facilities) (Under decommissioning procedures: 14 facilities)	Permission of changes in basic design (approval)	2
	Permission (approval) of design and construction plan or permission (approval) of their change	5
	Pass in pre-service inspection	1
	Issuance of pre-use confirmation certificate	3
	Permission of partial use	1
	Approval of test use	3
	Permission (approval) of operational safety program or permission (approval) of their change	12
	Permission of decommissioning plan	0
Spent fuel storage facility (1 facilities)	Approval of change in decommissioning plan	1
	Permission of change in operation	0
	Approval of design and construction plan or approval of their change	2
	Issuance of pre-use confirmation certificate	1
	Approval of test use	1
	Approval of change in operational safety program	1
	Approval of type certification or change	1
Reprocessing plant (2 facilities) (Under decommissioning procedures: 1 facilities)	Approval of type designation or change	0
	Permission of change in operation	0
	Approval of design and construction plan or approval of their change	0
	Pass in pre-service inspection	0
	Approval of change in decommissioning plan	0
Category 2 waste disposal facility (2 facilities)	Approval of change in operational safety program	2
	Permission of change in operation	0
	Confirmation of waste disposal facilities	0
	Confirmation of waste package	31
Waste storage facility (2 facilities)	Approval of change in operational safety program	2
	Permission of change in operation	0
	Approval of design and construction plan or approval of their change	1
Nuclear material utilization facility* ¹ (Applicable facility: 10 facilities) (Non-applicable facility: 190 facilities)	Approval of change in operational safety program	3
	Permission (approval) of use or permission (approval) of change	29
	Pass in facility inspection	0
	Issuance of pre-use confirmation certificate	2
	Approval of operational safety program or approval of their change	8
	Permission of decommissioning plan	1
Off-site disposal and transportation of nuclear fuel material, etc.	Confirmation of completion with decommissioning measures	3
	Confirmation of off-site disposal	0
	Approval of nuclear fuel deliveries' design	16
	Approval of transportation containers	8
	Renewal of period to approve design	0
	Renewal of period to approve containers	0
	Confirmation of off-site transportation	15
	Confirmation of radioactive concentration	2

* There is no facility that received designation or approval of the business of refining facility or Category 1 waste disposal facility as of March 31, 2025.

*1: Facilities that use nuclear fuel materials listed in each item of Article 41 of the Cabinet Order of the Reactor Regulation Act are classified as "Applicable facility" and facilities that do not use such materials are classified as "Non-applicable facility".

6. Status of Application and Approval of Extension of the Operational Period

Applicant	Targeted Power Reactor	Application Date	Date of Approval	Date at which 40 Years Have Elapsed after Operation Started
Kansai Electric Power Company.	Takahama PS Unit 1	April 30, 2015	June 20, 2016	November 13, 2014
	Takahama PS Unit 2	April 30, 2015	June 20, 2016	November 13, 2015
	Takahama PS Unit 3	April 25, 2023	May 29, 2024	January 16, 2025
	Takahama PS Unit 4	April 25, 2023	May 29, 2024	June 4, 2025
	Mihama NPS Unit 3	November 26, 2015	November 16, 2016	November 30, 2016
Japan Atomic Power Company	Tokai Daini NPS	November 24, 2017	November 7, 2018	November 27, 2018
Kyushu Electric Power Company.	Sendai NPS Unit 1	October 12, 2022	November 1, 2023	July 3, 2024
	Sendai NPS Unit 2	October 12, 2022	November 1, 2023	November 27, 2025

7. Status of Application and Approval of Change in Operational Safety Program concerning Aging Management

Applicant	Targeted Power Reactor	Application Date	Date of Approval	Date at which 30 Years, 40 Years or 50 Years Elapse after Operation Started
Kansai Electric Power Company.	Takahama PS Unit 3 (30 years)	January 15, 2014	November 18, 2015	January 16, 2015
	Takahama PS Unit 4 (30 years)	June 3, 2014	November 18, 2015	June 4, 2015
	Takahama PS Unit 1 (40 years)	April 30, 2015	June 20, 2016	November 13, 2014 ^{*1}
	Takahama PS Unit 2 (40 years)	April 30, 2015	June 20, 2016	November 13, 2015 ^{*1}
	Takahama PS Unit 3 (40 years)	April 25, 2023	May 29, 2024	January 16, 2025
	Takahama PS Unit 4 (40 years)	April 25, 2023	May 29, 2024	June 4, 2025
	Takahama PS Unit 1 (50 years)	November 2, 2023	October 16, 2024	November 13, 2024
	Mihama NPS Unit 3 (40 years)	November 26, 2015	November 16, 2016	November 30, 2016
	Ohi NPS Unit 3 (30 years)	December 2, 2020	November 24, 2021	December 17, 2021
	Ohi NPS Unit 4 (30 years)	December 3, 2021	August 24, 2022	February 1, 2023
Chugoku Electric Power Company.	Shimane NPS Unit 2 (30 years)	February 7, 2018	April 24, 2024	February 9, 2019
Shikoku Electric Power Company.	Ikata NPS Unit 3 (30 years)	November 1, 2023	October 16, 2024	December 14, 2024
Kyushu Electric Power Company.	Genkai NPS Unit 3 (30 years)	March 13, 2023	March 13, 2024	March 17, 2024
	Sendai NPS Unit 1 (30 years)	December 18, 2013	August 5, 2015	July 3, 2014
	Sendai NPS Unit 2 (30 years)	November 21, 2014	November 18, 2015	November 27, 2015
	Sendai NPS Unit 1 (40 years)	October 12, 2022	November 1, 2023	July 3, 2024
	Sendai NPS Unit 2 (40 years)	October 12, 2022	November 1, 2023	November 27, 2025
Japan Atomic Power Company	Tokai Daini NPS (40 years)	November 24, 2017	November 7, 2018	November 27, 2018

*1: The change of the long-term maintenance management policy due to the review of technical assessment concerning the aging degradation of reactor facilities.

8. Status of Application for Approval of Long-Term Facility Management Plan

Applicant	Targeted Power Reactor	Period	Application Date	Date of Approval
Kansai Electric Power Company.	Ohi NPS Unit 3	Over 30 years	December 21, 2023	June 26, 2024
	Ohi NPS Unit 4	Over 30 years	December 21, 2023	June 26, 2024
Kyushu Electric Power Company.	Sendai NPS Unit 1	Over 40 years	June 24, 2024	November 29, 2024
	Sendai NPS Unit 2	Over 30 years	June 24, 2024	November 29, 2024
Tohoku Electric Power Company.	Onagawa NPS (Unit 2)	Over 30 years	June 27, 2024	–
Kansai Electric Power Company.	Takahama PS Unit 2	Over 40 years	July 19, 2024	December 16, 2024
Chugoku Electric Power Company.	Shimane NPS Unit 2	Over 30 years	July 30, 2024	–
Kansai Electric Power Company.	Takahama PS Unit 3	Over 40 years	August 20, 2024	January 17, 2025
Kansai Electric Power Company.	Takahama PS Unit 4	Over 40 years	August 20, 2024	January 17, 2025
Kyushu Electric Power Company.	Genkai NPS Unit 3	Over 30 years	August 30, 2024	March 5, 2025
Kansai Electric Power Company.	Mihama NPS Unit 3	Over 40 years	October 15, 2024	March 27, 2025
Kansai Electric Power Company.	Takahama PS Unit 1	Over 50 years	October 24, 2024	March 27, 2025
Shikoku Electric Power Company.	Ikata NPS Unit 3	Over 30 years	October 31, 2024	March 27, 2025
Kansai Electric Power Company.	Takahama PS Unit 2	Over 50 years	December 25, 2024	–
Kyushu Electric Power Company.	Sendai NPS Unit 2	Over 40 years	January 31, 2025	–

9. Status of Approval of Decommissioning Plan

Type of Facility	Applicant	Targeted Facility	Application Date	Date of Approval
Commercial Power Reactors (Under decommissioning)	Japan Atomic Power Company	Tokai NPS	March 10, 2006	June 30, 2006
		Tsuruga NPS Unit 1	February 12, 2016	April 19, 2017
	Tohoku Electric	Onagawa NPS Unit 1	July 29,	March 18,

Type of Facility	Applicant	Targeted Facility	Application Date	Date of Approval
Decommissioning procedure s: 18 facilities)	Power Company.		2019	2020
	Tokyo Electric Power Company Holdings, Inc.	Fukushima Daini NPS Units 1-4	May 29, 2020	April 28, 2021
	Chubu Electric Power Company.	Hamaoka NPS Units 1-2	June 1, 2009	November 18, 2009
	Kansai Electric Power Company.	Mihama NPS Units 1-2	February 12, 2016	April 19, 2017
		Ohi NPS Units 1-2	November 22, 2018	December 11, 2019
	Chugoku Electric Power Company.	Shimane NPS Unit 1	July 4, 2016	April 19, 2017
	Shikoku Electric Power Company.	Ikata NPS Unit 1	December 26, 2016	June 28, 2017
		Ikata NPS Unit 2	October 10, 2018	October 7, 2020
	Kyushu Electric Power Company.	Genkai NPS Unit 1	December 22, 2015	April 19, 2017
		Genkai NPS Unit 2	September 3, 2019	March 18, 2020
Fuel fabrication facility (1 facility)	Japan Atomic Energy Agency	Ningyo-toge Environmental Engineering Center	September 28, 2018	January 20, 2021
Research reactor facility (Under decommissioning procedure s: 14 facilities)	Japan Atomic Energy Agency	JRR-2, Nuclear Science Research Institute	May 12, 2006	November 6, 2006
		JRR-4, Nuclear Science Research Institute	December 25, 2015	June 7, 2017
		Transient Experiment Critical Facility (TRACY), Nuclear Science Research Institute	March 31, 2015	June 7, 2017
		Tank-type Critical Assembly (TCA), Nuclear Science Research Institute	April 26, 2019	March 17, 2021
		Fast Critical Assembly (FCA), Nuclear Science Research Institute	March 31, 2021	September 29, 2021
		Deuterium Critical Assembly (DCA), Oarai Research & Development Institute	May 12, 2006	October 20, 2006
		Japan Material Testing Reactor (JMTR), Oarai Research & Development Institute	September 18, 2019	March 17, 2021
		First Nuclear Ship “Mutsu,” Aomori Research and Development Center	March 31, 2006	October 20, 2006
	University of Tokyo	University of Tokyo Reactor (Yayoi), Nuclear Professional School, The Graduate School of Engineering, The University of Tokyo	June 29, 2012	August 24, 2012
	Rikkyo University	Rikkyo University Reactor,	May 30,	June 1, 2007

Type of Facility	Applicant	Targeted Facility	Application Date	Date of Approval
		Institute for Atomic Energy, Rikkyo University	2006	
	Gotoh Educational Corporation	TCU Reactor, Atomic Energy Research Laboratory, Tokyo City University	May 30, 2006	June 5, 2007
	Ozenji Center, Hitachi, Ltd.	Hitachi Training Reactor (HTR)	May 31, 2006	April 20, 2007
	Toshiba Nuclear Engineering Laboratory	Toshiba Nuclear Critical Assembly (NCA)	December 23, 2019	April 28, 2021
		Toshiba Training Reactor (TTR-1)	March 31, 2006	May 22, 2007
Commercial power reactors in the research and development phase (Under decommissioning procedures: 2 facilities)	Japan Atomic Energy Agency	Prototype Advanced Converter Reactor FUGEN	November 7, 2006	February 12, 2008
		Prototype Fast Breeder Reactor MONJU	December 6, 2017	March 28, 2018
Reprocessing plant	Japan Atomic Energy Agency	Reprocessing Facility, Nuclear Fuel Cycle Engineering Laboratories	June 30, 2017	June 13, 2018

Reference 4. Materials related to Promotion of Safety Research and Continuous Improvement of Regulatory Requirements (related to Section 3 in Chapter 2)

1. FY 2024 Safety Research

No.	Research Area	Project Name	Period
1	External Events	Research on improvement of reliability of seismic ground motion evaluation methods	FY 2024-FY 2028
2		Research on fault activity evaluation methods	FY 2024-FY 2028
3		Research on tsunami evaluation methods and source estimation of past tsunamis	FY 2021-FY 2024
4		Research on improvement of fragility evaluation methods for structures, systems and components subjected to external events	FY 2021-FY 2024
5	Fire protection	Research on fire hazard analysis for protection of nuclear power stations (Phase 2)	FY 2021-FY 2024
6	Risk Assessment	Research on Level 1 PRA for Nuclear Regulatory Inspection	FY 2022-FY 2026
7	Severe Accident	Research on hydrogen behavior based on severe accident progression	FY 2023-FY 2026
8		Experimental research to reduce uncertainties for important physicochemical phenomena during severe accidents	FY 2020-FY 2025
9	Reactor Physics	Research on best estimate plus uncertainty method on neutronics analysis	FY 2021-FY 2024
10	Nuclear Fuel	Research on the behavior of accident tolerant fuels and current commercial fuels under accident conditions	FY 2024-FY 2028
11	Materials and Structures	Study on verification of evaluation methods of aging degradation using materials and harvested from LWRs	FY 2020-FY 2024
12	Specified Nuclear Facility	Development of a database and evaluation methodology for criticality of fuel debris at the Fukushima Daiichi Nuclear Power Station	FY 2014-FY 2024
13	Nuclear Fuel Cycle Facility	Study on the event progression of severe accidents at reprocessing facilities and MOX fuel fabrication facilities	FY 2021-FY 2025
14	Radioactive waste disposal facilities	Research on long-term performance assessment for radioactive waste disposal	FY 2021-FY 2024
15	Decommissioning and Clearance	Research on quantitative evaluation techniques for activity concentration of radioactive waste	FY 2021-FY 2024
16	Nuclear Disaster Preparedness	Research on the revision of Emergency Action Levels (EAL) considering specific accident response facilities	FY 2021-FY 2025
17	Radiation Protection	Research on improving the accuracy of dose and health risk assessment for radiation protection	FY 2022-FY 2026

2. Publication in Journals and List of Publication

No.	Category	Paper Titles, etc.
1	Publication in journals	Yamashita, K., Kakinuma, T., "Interpretation of the global tsunami amplitude distribution due to the air pressure waves from the 2022 Hunga Tonga–Hunga Ha`apai volcanic eruption", Applied Ocean Research, Vol. 151, 104168, 2024. doi:10.1016/j.apor.2024.104168
2		Hasegawa, T., Kusu, C., Okada, M., Hiratsuka, A., Nishiki, K., Sato, Y., Koshigai, M., Matsuzaki, T., Yamamoto, Y., "Application of a recently developed method of oriented drill coring to accumulative tephra layers: identification of the Matuyama–Brunhes geomagnetic reversal in Akan caldera-forming eruption deposits", Earth, Planets and Space, Vol. 76, No. 139, 2024. doi:10.1186/s40623-024-02084-7
3		Hasegawa, T., Mochizuki, N., Shibuya, H., Nishihara, A., Kusu, C., Shibata, S., Okada, M., Nishiki, K., Sato, Y., "Paleomagnetic study of the 30 ka Aira caldera-forming eruption and 60–45 ka Iwato pyroclastic flow deposits, southern Kyushu, Japan", Earth, Planets and Space, Vol. 76, No. 161, 2024. doi:10.1186/s40623-024-02089-2
4		Matsu'ura, T., Ishitsuka, K., "Geological and geodetical vertical deformation profiles across the Kuradake fault group, Central Kyushu, SW Japan: Estimation of the proportion of triggered aseismic slip in the total late Quaternary slip", Tectonophysics, Vol. 898, 230625, 2025. doi: 10.1016/j.tecto.2025.230625
5		NAGAI Minoru, KITAMURA Toshiya, YOSHIMURA Eiji, HIBINO Kenta, "Slap-down Drop Test from Height of 9 m for 1/2.3-Scale Metal Casks", Transactions of the Atomic Energy Society of Japan, Vol. 23, No. 4, pp. 101–117, 2024. doi:10.3327/taesj.J23.015
6		TORIYAMA Takuya, YAMASHITA Kei, ISHIDA Nobuo, "Identifying Relationship between Content Ratio of Silty Sediment and Characteristics of Sampling Region", Journal of Japan Society of Civil Engineering, Vol. 80, No. 17, 2024. doi: 10.2208/jscej.24-17229
7		OTA Yoshimi, MATSUZAWA Ryo, "A Study on Theoretical Penetration Evaluation of Rigid Ogive-Nose Projectiles", Journal of Structural Engineering, JSCE, Vol. 71A, pp. 852-861, 2025. doi:10.11532/structcivil.71A.852
8		Sekine, M., Tsukamoto, N., Masuhara, Y., Furuya, M., "Experimental Study on Thermal Stratification in Water Pool with Vertical Heat Source", Annals of Nuclear Energy, Vol. 207, 110681, 2024. doi:10.1016/j.anucene.2024.110681
9		Taira, M., Fujiwara, T., Arita, Y., "Study on CsI release rate coefficient from fuel for source term evaluation", Annals of Nuclear Energy, Vol. 216, No. 15, 2025. doi:10.1016/j.anucene.2025.111288
10		Shiba, S., "Nuclear Data Uncertainty Propagation in the PWR MOX/UO ₂ Core Transient Benchmark", Nuclear Technology, 2024. doi:10.1080/00295450.2024.2421671
11	Publication in journals	Kitano, K., Akiyama, H., Ohishi, Y., Muta, H., "EPMA and EBSD observations of unirradiated MIMAS-MOX fuels for the study of fission gas release and thermal conductivity", Journal of Nuclear Science and Technology, Vol. 62, No. 4, pp. 341- 352, 2025. doi:10.1080/00223131.2024.2429803
12		Baccou, J., Glantz, T., Ghione, A., Sargentini, L., Fillion, P., Damblin, G., Sueur, R., Iooss, B., Fang, J., Liu, J., Yang, C., Zheng, Y., Ui, A., Saito, M.,

No.	Category	Paper Titles, etc.
		Mendizábal Sanz, R., Bersano, A., Mascari, F., Skorek, T., Tiborcz, L., Hirose, Y., Takeda, T., Nakamura, H., Choi, C., Heo, J., Petruzzi, A., Zeng, K., Xie, Z., Wu, X., Eguchi, H., Pangukir, F., Breijder, P., Franssen, S., Perret, G., Clifford, I.D., Coscia, T.M., Di Maio, F., Zio, E., Pedroni, N., Zhang, J., Freixa, J., Rizzo, F., Ciurluini, C., Giannetti, F., Adorni, M. "A systematic approach for the adequacy analysis of a set of experimental databases: Application in the framework of the ATRIUM activity", Nuclear Engineering and Design, Vol. 421, p.113035_1 - 113035_16, 2024. doi: 10.1016/j.nucengdes.2024.113035
13		Hirota, A., Kouduka, M., Fukuda, A., Miyakawa, K., Sakuma, K., Ozaki, Y., Ishii, E., Suzuki, Y., "Biofilm Formation on Excavation Damaged Zone Fractures in Deep Neogene Sedimentary Rock", Microbial Ecology, Vol. 87, article number 132, 2024. Doi:10.1007/s00248-024-02451-7
14		Nomura, M., Park, K. C., Takahashi, H., Tsukahara, T., "Comparative evaluation of uranium isotope ratios by peak-jumping and static multi-collector measurements in thermal ionization mass spectrometry", International Journal of Mass Spectrometry Vol. 503, 117277, 2024. doi:10.1016/j.ijms.2024.117277
15		Yoshii, T., Kawarabayashi, J., "Development of a practical conversion factor for evaluating radioactivity in mixed metal and plastic clearance objects", Applied Radiation and Isotopes, Vol. 217, 111670, 2025. doi:10.1016/j.apradiso.2025.111670
16		Yamamoto, K., Ohno, T., Kitamura, G., Takahashi, H., Hirata, T., "Deciphering the uranium isotopic signature of coastal water and sediments from Tokyo Bay using a multi-collector inductively coupled plasma mass spectrometer", Environmental Technology & Innovation, Vol 36, 103761, 2024. doi:10.1016/j.eti.2024.103761
1	Publication of papers at academic conference	Azuma, K., Fujiwara, K., Kai, S., Otani, A., Furuya, O., "Design Margins of Fatigue Life of Carbon Steel Elbows and Tees Subjected to Reversing Dynamic Loads", Proceedings of the ASME Pressure Vessels & Piping Conference 2024, PVP2024-123304, 2024. doi:10.1115/PVP2024-123304
2		Fujiwara, K., Teragaki, T., Hibino, K., Kubo, K., "Study on a Method for Evaluating the Seismic Fragilities Considering the Response Correlation for Seismic PRA", Proceedings of PSAM17&ASRAM2024, 2024.
3		OTA Yoshimi, NIKAIDO Yuji, ABE Hiroki, YAMAZAKI Hiroaki, "An Experimental Study on Penetration Events of Hemispherical Rigid Projectiles into Kimachi-Stone", Proceedings of the 16th JSRM Symposium on Rock Mechanics, pp.316-321, 2025
4		Takizawa, M., Kabashima, H., Matsuda, A., "Electrical insulation performance of flame-retardant electrical cables with thermoplastic and thermosetting materials for nuclear power plants", Journal of Physics: Conference Series, vol. 2885, 012018, Proceedings of 4th European Symposium on Fire Safety Science (ESFSS 2024), 2024. doi:10.1088/1742-6596/2885/1/012018
5		Yagihashi, H., Goto, K., Sekine, M., Tsukamoto, N., "VALIDATION OF TRACE SIMULATION OF SMALL-BREAK LOCA TEST (SB-CL-18) IN THE LARGE-SCALE TEST FACILITY", Proceedings of ICONE31, 2024.
6		Goto, K., Yagihashi, H., Sekine, M., Tsukamoto, N., "Comparison of LSTF test (SB-CL-18) and PWR plant analysis", Proceedings of PSAM17&ASRAM2024, 2024.

No.	Category	Paper Titles, etc.
7		Kikuch, W., Hotta, A., Ito, K., Yugo, H., Shimizu, M., "ANALYTICAL STUDY OF MELT SPREADING IN SHALLOW POOL OBSERVED IN PULiMSE10 TEST USING MSPREAD IMPLEMENTED WITH MOLTEN JET QUENCH MODEL", Proceedings of ICONE31, 2024.
8		Van Oudenaren, G.I.L., Grupa, J.B., Kim, S., Suzuki C., Wadayama, K., Nagakubo, A., "A Benchmark Comparison of Level 3 Probabilistic Safety Assessment Codes: Preliminary Results from First Calculations", Proceedings of PSAM17&ASRAM2024, 2024.
9		Kojo, R., "Development of Comparison Methodologies of Importance Analyses for Level 1 PRA and Level 2 PRA using Multiple Indicators", Proceedings of PSAM17&ASRAM2024, 2024.
10		Shiba, S., "Uncertainty Quantification of Critical Boron Concentration in Tihange-2 Reactor Core Tracking Analysis Using CASMO5/SIMULATE5 with JENDL-5", 2024 ANS annual conference, 2024. doi:10.13182/T130-44023

Reference 5. Materials related to Promotion of Nuclear Security (related to Section 1 in Chapter 3)

1. Numbers of Approvals and Inspection of Regulations for the Security Plan

(April 1, 2024, to March 31, 2025)

Approvals of changes in regulations for the security plan	55 (breakdown) Fuel fabrication facility: 5 Research and test reactor: 4 Commercial power reactor: 32 Power reactor in research and development phase: 2 Spent fuel storage facility: 0 Reprocessing facility: 4 Waste storage facility: 3 Nuclear material utilization facility: 5
Approval of change in implementation plan	Specified nuclear facility: 3
Inspection of compliance with regulations for the security plan (Nuclear regulatory inspection (physical protection of nuclear material))	114 (breakdown) Fuel fabrication facility: 14 Research and test reactor: 10 Commercial power reactor: 54 Power reactor in research and development phase: 3 Spent fuel storage facility: 1 Reprocessing facility: 6 Waste storage facility: 3 Nuclear material utilization facility: 23
Inspection of compliance with the implementation plan	Specified nuclear facility: 3

2. Overview of IPPAS Missions

Overview

IPPAS missions are conducted by teams of international experts in nuclear security under the leadership of the IAEA. Based on requests from IAEA member states, these missions review the implementation of physical protection measures in national regulatory systems and relevant facilities in relation to the nuclear security of nuclear material and other radioactive substances, as well as associated facilities, thereby providing advice and other support to contribute to the enhancement of nuclear security in accordance with the Revised Convention on the Physical Protection of Nuclear Material and IAEA nuclear security recommendations.

Japan previously hosted an IPPAS mission in February 2015 and its follow-up mission from November to December 2018, and the third IPPAS mission from July to August 2024.

**Reference 6. Materials related to Oversight of Efforts toward the
Decommissioning of Reactors at TEPCO's Fukushima Daiichi NPS
(related to Section 1 in Chapter 4)**

**1. Approval and Inspection of the Implementation Plan for Specified Nuclear
Facilities (TEPCO Fukushima Daiichi NPS)**

(April 1, 2024, to March 31, 2025)

Type of Approval/ Inspection	No. of Cases
Approval of changes in implementation plans (excluding approvals concerning physical protection of nuclear material)	14
Completion with pre-service inspection	15
Approval of test use	0
Permission of partial use	1
Instruction of omission of pre-service inspection	0
Completion with welding inspection	10
Completion with welding inspection for imports	1
Completion with periodic facility inspection	1
Operational safety inspection	4

Reference 7. Materials related to Implementation and Continuous Improvement of Regulations relating to the Radioisotope Regulation Act (related to Section 2 in Chapter 5)

1. Status of Reviews and Inspections under the Radioisotope Regulation Act

(April 1, 2024, to March 31, 2025)

(1) Review

Operator	Type of Applications and Notifications	No. of Cases
Permitted users (Number of offices: 2029)	Application for permission (approval) of use	21
	Application for permission (approval) of changes in permitted use	257
	Notification of discontinuation	32
Notified users (Number of offices: 381)	Notification of use	7
	Notification of changes in notification of use	32
	Notification of discontinuation	19
Notified users of approved devices with certification label (Number of offices: 4970)	Notification of use of approved devices with certification label	563
	Notification of changes in use of approved devices with certification label	826
	Notification of discontinuation	777
Notified sellers (Number of offices: 330)	Notification of selling business	4
	Notification of changes in notification of selling business	42
	Notification of discontinuation	6
Notified lessors (Number of offices: 163)	Notification of leasing business	0
	Notification of changes in notification of leasing business	24
	Notification of discontinuation	6
Permitted disposal operators (Number of offices: 7)	Application for permission (approval) of disposal business	0
	Application for permission of changes in disposal business	1
	Notification of discontinuation	0
Transportation of radioisotopes and other materials outside of factory or place of business	Application for approval of containers to be transported	0
Registered organizations (Number of registered organizations: 19)	Application for registration	0
	Application for renewal of registration	2
	Application for approval and notification of operational rules	0
	Application for approval and notification of changes in operational rules	6

(2) Inspection

Authorized operators	On-site inspection for safety	216

	On-site inspection for security of specified radioisotopes	90
Registered organizations	On-site inspection relating to implementation status of registered organization's operation	11

Reference 8. Activities of Committees, Councils, Review Meetings, Study Teams, etc.

Meeting records as of the end of FY 2024

1. Committees and Councils
 - (1) Advisory Committee on Reactor Safety
 - (2) Advisory Committee on Nuclear Fuel Safety
 - (3) Joint Review Meetings of the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee, etc.
 - (4) Radiation Council
 - (5) National Research and Development Agency Council
2. Review Meeting
 - (1) Review Meeting on Conformity to the New Regulatory Requirements
 - (2) Review Meeting on Decommissioning of Nuclear Facilities
 - (3) Review Meeting on Containers for Transportation and Specified Containers for Spent Fuel Facilities
 - (4) Review Meeting on Long-Term Facility Management Plan of Commercial Power Reactors
 - (5) Review Meeting on Type Certification, etc. of Specific Dual-Use Cask Design
3. Study Teams
 - (1) Technical Study Team on Environmental Radiation Monitoring
 - (2) Safety Oversight Team for Tokai Reprocessing Facility and Other Facilities
 - (3) Safety Oversight Team for Prototype Fast Breeder Reactor MONJU Decommission
 - (4) JAEA Back-End Measures Monitoring Team
 - (5) Study Team on Technical Evaluation of JSME (the Japan Society of Mechanical Engineers) Standards for Design and Construction, Materials and Welding
 - (6) Technical Review Team on Technical Evaluation of the Japan Electric Association Standards concerning the Surveillance Test Practice for Reactor Vessel Structure Material and Fracture Toughness Verification Test Practice
 - (7) Study Team on Safety Regulations for Aging Power Reactors
 - (8) Study team on operation of sheltering in place in the event of nuclear emergency.
4. Committees for Specific Research and Study
 - (1) Committee on Oversight and Evaluation of Specified Nuclear Facilities
 - (2) Technical Meeting for Review of Implementation Plans for Specific Nuclear Facilities
 - (3) Committee on Accident Analysis of the Fukushima Daiichi Nuclear Power Station
 - (4) Fukushima Daiichi NPS Decommissioning and Accident Investigation Liaison and Coordination Meeting
 - (5) Technical Information Committee
 - (6) Technical Evaluation Committees
5. Others

- (1) NRA Policy Assessment Meeting
- (2) Meeting of external experts on the NRA's Administrative Project Review
- (3) Meeting on Hearing Opinions of Operators regarding New Regulatory Requirements
- (4) the Debriefing Session of Emergency Drills by Nuclear Operators
- (5) Exchange of Opinions on the Way of Training and Regulatory Involvement in Emergency Response by Nuclear Operators
- (6) Information Exchange Meeting on the Inspection Program
- (7) Working-level Technical Information Exchange Meeting

1. Committees and Council *As of March 31, 2025

(1) Advisory Committee on Reactor Safety

Overview

The Reactor Safety Examination Committee (RSEC) was established to investigate and deliberate matters related to reactor safety based upon instructions of the NRA in accordance with the Act for Establishment of the Nuclear Regulation Authority (Act No. 47 of 2012). Taking into account the House of Councillors' resolution added to the Act for Establishment of the Nuclear Regulation Authority (June 20, 2012, House of Councillors, Environment Committee), the RSEC's investigations are intended to provide objective advice for the NRA's decisions, but without substitutions for such decisions. The RSEC is also expected to check the effectiveness of the regulatory activities by the NRA and advise on the activities from a scientific and technical point of view while maintaining independence from the NRA.

At the 41st FY 2013 NRA Commission Meeting (February 5, 2014), the NRA adopted RSEC establishment policies based on the Act for Establishment of NRA. Based on the policy, RSEC held its first examination meeting on May 12, 2014. It has been holding RSEC meetings regularly since then.

At the 66th FY 2024 NRA Meeting (March 5, 2025), the NRA decided to revise the items for investigation and deliberation.

In FY 2024, the meeting of the RSEC was held once, the Subcommittee on Reactor Safety twice, the Subcommittee on Earthquakes and Tsunami once and the Subcommittee on Volcanic Hazards once. Additionally, the NRA received reports on the deliberations status from the 16th Subcommittee on Reactor Safety Meeting (March 8, 2024) at the 3rd FY 2024 NRA Commission Meeting (April 17, 2024), from the 17th Subcommittee on Reactor Safety Meeting (June 28, 2024) and the 4th Subcommittee on Earthquakes and Tsunami Hazards Meeting (June 24, 2024) at the 27th 2024 NRA Commission Meeting (August 28, 2024), and from the 18th Subcommittee on Reactor Safety Meeting (December 16, 2024) and the 13th

Subcommittee on Volcanic Hazards Meeting (November 13, 2024) at the 53rd
2024 NRA Commission Meeting (January 15, 2025).

Members of the Committee

Review Members	AKIYAMA Yoko	Associate Professor, Division of Sustainable Energy and Environment Engineering, School of Engineering, The University of Osaka
	IKEGAMI Masako	Professor, Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo
	ISHIKAWA Kenichi	Professor, The Graduate School of Engineering, The University of Tokyo
	ITOI Tatsuya	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	UCHIYAMA Mayuki	Visiting Professor, Department of Radiology, Jikei University School of Medicine
	OIGAWA Hiroyuki	Senior Executive Officer, Japan Atomic Energy Agency
	OGAWA Yasuo	Professor Emeritus, Tokyo Institute of Technology
	KANDA Reiko	Executive Director, National Institutes for Quantum Science and Technology
	KUMASAKI Mieko	Professor, Graduate School of Environment and Information Sciences, Yokohama National University
	KOSUGA Atsuko	Professor, Osaka Prefecture University Graduate School of Science
	KONDO Hiroko	Representative, LLC Matrix K
	SADAMATSU Jun	Specially Appointed Associate Professor, Komaba Organization for Educational Excellence, College of Arts and Sciences, The University of Tokyo
	SAWADA Akira	Executive Director, Japan Accreditation Board
	TAKAHASHI Hiroaki	Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
	TAKAHASHI Makoto	Professor, Technology and Social Systems, Graduate School of Engineering, Tohoku University
	NAGAI Yasuyoshi	Professor, Institute for Materials Research, Tohoku University
	NISHIYAMA Yutaka	Director, Nuclear Safety Research Center, Nuclear Safety and Emergency Preparedness Institute, Japan Atomic Energy Agency
	HISADA Yoshiaki	Professor, Department of Urban Design and Planning, School of Architecture, Kogakuin University
	HOUHARA Shinya	Associate Professor, Atomic Energy Research Institute, Kindai University
	MARUYAMA Yu	JAEA Fellow, Japan Atomic Energy Agency
	MIYAKE Hiroe	Professor, Earthquake Research Institute, The University of Tokyo
	MUTA Hitoshi	Professor, Graduate School of Science and

		Engineering, Tokyo City University
	MOGI Toshio	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	YAMAJI Akifumi	Professor, School of Advanced Science and Engineering, Faculty of Science and Engineering, Waseda University
	YAMAMOTO Akio ◎	Professor, Graduate School of Engineering, Nagoya University, Tokai National University Corporation
	YOSHIDA Hiroko	Research Professor, Research Center for Accelerator and Radioisotope Science, Tohoku University
	YOSHIHASHI Sachiko	Professor, Facility for Nuclear Materials, Nagoya University, Tokai National Higher Education and Research System
Temporary Members	OHBA Tsukasa	Professor, Graduate School of International Resource Sciences, Akita University
	OKUNO Mitsuru	Professor, Graduate School of Science, Osaka Metropolitan University
	TAKAHASHI Tomoyuki	President, Kansai University
	TANIOKA Yuichiro	Specially Appointed Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
	TOHDA Shinji	Professor, International Research Institute of Disaster Science, Tohoku University
	NAKAMICHI Haruhisa	Professor, Disaster Prevention Research Institute, Kyoto University
	HASEGAWA Takeshi	Professor, Graduate School of Science and Engineering, Department of Science, Ibaraki University
	BAN Masao	Professor in Charge, Graduate School of Science, Academic Research Center, Yamagata University
	MIURA Satoshi	Professor Emeritus, Tohoku University
Expert Members	AZUMA Takashi	Senior Researcher, Active Fault Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology
	UEDA Hideki	Director, Volcano Observation Network Laboratory, Center for Earthquake, Tsunami and Volcano Observation Research, National Research Institute for Earth Science and Disaster Resilience
	TANAKA Akiko	Career Researcher, Magmatic Activity Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology

*Double circle (◎) indicates a chairperson.

Members of the Subcommittee on Earthquake and Tsunami Hazards

Review Members	HISADA Yoshiaki	Professor, Department of Urban Design and Planning, School of Architecture, Kogakuin University
	MIYAKE Hiroe	Professor, Earthquake Research Institute, The University of Tokyo
Temporary Members	TAKAHASHI Tomoyuki	President, Kansai University
	TANIOKA Yuichiro	Specially Appointed Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
	TOHDA Shinji	Professor, International Research Institute of Disaster Science, Tohoku University
Expert Members	AZUMA Takashi	Senior Researcher, Active Fault Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology

* The chairperson is scheduled to be appointed at the next Subcommittee on Earthquake and Tsunami Hazards meeting.

Members of the Subcommittee on Volcanic Hazards

Review Members	OGAWA Yasuo◎	Professor Emeritus, Tokyo Institute of Technology
	TAKAHASHI Hiroaki	Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
Temporary Members	OHBA Tsukasa	Professor, Graduate School of International Resource Sciences, Akita University
	OKUNO Mitsuru	Professor, Graduate School of Science, Osaka Metropolitan University
	NAKAMICHI Haruhisa	Professor, Disaster Prevention Research Institute, Kyoto University
	HASEGAWA Takeshi	Professor, Graduate School of Science and Engineering, Department of Science, Ibaraki University
	BAN Masao	Professor in Charge, Graduate School of Science, Academic Research Center, Yamagata University
	MIURA Satoshi	Professor Emeritus, Tohoku University
Expert Members	UEDA Hideki	Director, Volcano Observation Network Laboratory, Center for Earthquake, Tsunami and Volcano Observation Research, National Research Institute for Earth Science and Disaster Resilience
	TANAKA Akiko	Career Researcher, Magmatic Activity Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology

*Double circle (◎) indicates a chairperson.

Members of the Subcommittee on Reactor Safety

Review Members	AKIYAMA Yoko	Associate Professor, Division of Sustainable Energy and Environment Engineering, School of Engineering, The University of Osaka
	IKEGAMI Masako	Professor, Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo
	ISHIKAWA Kenichi	Professor, The Graduate School of Engineering, The University of Tokyo
	ITOI Tatsuya	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	UCHIYAMA Mayuki	Visiting Professor, Department of Radiology, Jikei University School of Medicine
	OIGAWA Hiroyuki	Senior Executive Officer, Japan Atomic Energy Agency
	KANDA Reiko	Executive Director, National Institutes for Quantum Science and Technology
	KUMASAKI Mieko	Professor, Graduate School of Environment and Information Sciences, Yokohama National University
	KOSUGA Atsuko	Professor, Osaka Prefecture University Graduate School of Science
	KONDO Hiroko	Representative, LLC Matrix K
	SADAMATSU Jun	Project Associate Professor, Komaba Organization for Educational Excellence, College of Arts and Sciences, The University of Tokyo
	SAWADA Akira	Executive Director, Japan Accreditation Board
	TAKAHASHI Makoto	Professor, Technology and Social Systems, Graduate School of Engineering, Tohoku University
	NAGAI Yasuyoshi	Professor, Institute for Materials Research, Tohoku University
	NISHIYAMA Yutaka	Director, Nuclear Safety Research Center, Nuclear Safety and Emergency Preparedness Institute, Japan Atomic Energy Agency
	HISADA Yoshiaki	Professor, Department of Urban Design and Planning, School of Architecture, Kogakuin University
	HOUHARA Shinya	Associate Professor, Atomic Energy Research Institute, Kindai University
	MARUYAMA Yu	JAEA Fellow, Japan Atomic Energy Agency
	MUTA Hitoshi	Professor, Graduate School of Science and Engineering, Tokyo City University
	MOGI Toshio	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	YAMAJI Akifumi	Professor, School of Advanced Science and Engineering, Faculty of Science and Engineering, Waseda University
	YAMAMOTO Akio ©	Professor, Graduate School of Engineering, Nagoya University, Tokai National University Corporation
	YOSHIDA Hiroko	Research Professor, Research Center for Accelerator and Radioisotope Science, Tohoku University

	YOSHIHASHI Sachiko	Professor, Facility for Nuclear Materials, Nagoya University, Tokai National Higher Education and Research System

*Double circle (©) indicates a chairperson.

(2) Advisory Committee on Nuclear Fuel Safety

Overview

The Nuclear Fuel Safety Examination Committee (NFSEC) was established to investigate and deliberate matters related to nuclear fuel safety based upon instructions of the NRA in accordance with the Act for Establishment of the Nuclear Regulation Authority. Taking into account the House of Councilors' resolution added to the Act for Establishment of the Nuclear Regulation Authority, the NFSEC's investigations and deliberations are intended to provide objective advice for the NRA's decisions, but without substitutions for such decisions. The NFSEC is also expected to check the effectiveness of the regulatory activities by the NRA and advise on the activities from a scientific and technical point of view while maintaining independence from the NRA.

At the 41st FY 2013 NRA Commission Meeting (February 5, 2014), the NRA adopted NFSEC establishment policies based on the Act for Establishment of NRA. Based on the policy, NFSEC held its first examination meeting on May 12, 2014. It has been holding NFSEC meetings regularly since then.

At the 66th FY 2024 NRA Meeting (March 5, 2025), the NRA decided to revise the items for investigation and deliberation.

In FY 2024, the NFSEC was held once, the Subcommittee on Nuclear Fuel Safety twice, Subcommittee on Earthquake and Tsunami Hazards Meeting once, and the Subcommittee on Volcanic Hazards Meeting once. Additionally, the NRA received reports on the deliberations status from the 10th Subcommittee on Nuclear Fuel Safety Meeting (March 8, 2024) at the 3rd FY 2024 NRA Meeting (April 17, 2024), from the 11th Subcommittee on Nuclear Fuel Safety Meeting (June 28, 2024) and the 4th Subcommittee on Earthquakes and Tsunami Hazards Meeting (June 24, 2024) at the 27th 2024 Nuclear Regulation Authority Meeting (August 28, 2024), and from the 12th Subcommittee on Nuclear Fuel Safety Meeting (December 16, 2024) and the 13th Subcommittee on Volcanic Hazards Meeting (November 13, 2024) at the 53rd 2024 Nuclear Regulation Authority Meeting (January 15, 2025).

Members of the Committee

Review Members	IKEGAMI Masako	Professor, Professor, Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo
	ITOI Tatsuya	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	UNESAKI Hironobu	Professor, Institute for Integrated Radiation and Nuclear Science, Kyoto University Professor, Socio-Environmental Energy Science Dept., Graduate School of Energy Science, Kyoto University
	OGAWA Yasuo	Professor Emeritus, Tokyo Institute of Technology
	KIRISHIMA Akira	Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University
	KUROSAKI Ken	Professor, Director, Research Center for Safe Nuclear System, Institute for Integrated Radiation and Nuclear Science, Kyoto University
	KOSUGA Atsuko	Professor, Osaka Prefecture University Graduate School of Science
	SAITO Takumi	Professor, Nuclear Professional School, The Graduate School of Engineering, The University of Tokyo
	SADAMATSU Jun	Project Associate Professor, Komaba Organization for Educational Excellence, College of Arts and Sciences, The University of Tokyo
	SAWADA Akira	Executive Director, Japan Accreditation Board
	SUMI Minako	Head, Radiation Oncology Department, Tokyo Metropolitan Geriatric Medical Center
	TAKAGI Ikuji	Professor, Graduate School of Engineering, Kyoto University
	TAKAHASHI Hiroaki	Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
	NAKAMURA Takehiko◎	Research Officer, Sector of Nuclear Safety Research and Emergency Preparedness, Japan Atomic Energy Agency
	HISADA Yoshiaki	Professor, Department of Urban Design and Planning, School of Architecture, Kogakuin University
	MIYAKE Hiroe	Professor, Earthquake Research Institute, The University of Tokyo
	YOSHIDA Hiroko	Research Professor, Research Center for Accelerator and Radioisotope Science, Tohoku University
	YOSHIHASHI Sachiko	Professor, Facility for Nuclear Materials, Nagoya University, Tokai National Higher Education and Research System
	WATANABE Naoko	Professor, Division of Applied Quantum Science and Engineering, Graduate School of Engineering, Hokkaido University
Temporary Members	OHBA Tsukasa	Professor, Graduate School of International Resource Sciences, Akita University
	OKUNO Mitsuru	Professor, Graduate School of Science, Osaka

		Metropolitan University
	TAKAHASHI Tomoyuki	President, Kansai University
	TANIOKA Yuichiro	Specially Appointed Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
	TOHDA Shinji	Professor, International Research Institute of Disaster Science, Tohoku University
	NAKAMICHI Haruhisa	Professor, Disaster Prevention Research Institute, Kyoto University
	HASEGAWA Takeshi	Professor, Graduate School of Science and Engineering, Department of Science, Ibaraki University
	BAN Masao	Professor in Charge, Graduate School of Science, Academic Research Center, Yamagata University
	MIURA Satoshi	Professor Emeritus, Tohoku University
Expert Members	AZUMA Takashi	Senior Researcher, Active Fault Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology
	UEDA Hideki	Director, Volcano Observation Network Laboratory, Center for Earthquake, Tsunami and Volcano Observation Research, National Research Institute for Earth Science and Disaster Resilience
	TANAKA Akiko	Career Researcher, Magmatic Activity Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology

*Double circle (©) indicates a chairperson.

Members of the Subcommittee on Earthquake and Tsunami Hazards

Review Members	HISADA Yoshiaki	Professor, Department of Urban Design and Planning, School of Architecture, Kogakuin University
	MIYAKE Hiroe	Professor, Earthquake Research Institute, The University of Tokyo
Temporary Members	TAKAHASHI Tomoyuki	President, Kansai University
	TANIOKA Yuichiro	Specially Appointed Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
	TOHDA Shinji	Professor, International Research Institute of Disaster Science, Tohoku University
Expert Members	AZUMA Takashi	Senior Researcher, Active Fault Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology

* The chairperson is scheduled to be appointed at the next Subcommittee on Earthquake and Tsunami Hazards meeting.

Members of the Subcommittee on Volcanic Hazards

Review Members	OGAWA Yasuo◎	Professor Emeritus, Tokyo Institute of Technology
	TAKAHASHI Hiroaki	Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University
Temporary Members	OHBA Tsukasa	Professor, Graduate School of International Resource Sciences, Akita University
	OKUNO Mitsuru	Professor, Graduate School of Science, Osaka Metropolitan University
	NAKAMICHI Haruhisa	Professor, Disaster Prevention Research Institute, Kyoto University
	HASEGAWA Takeshi	Professor, Graduate School of Science and Engineering, Department of Science, Ibaraki University
	BAN Masao	Professor in Charge, Graduate School of Science, Academic Research Center, Yamagata University
	MIURA Satoshi	Professor Emeritus, Tohoku University
Expert Members	UEDA Hideki	Director, Volcano Observation Network Laboratory, Center for Earthquake, Tsunami and Volcano Observation Research, National Research Institute for Earth Science and Disaster Resilience
	TANAKA Akiko	Career Researcher, Magmatic Activity Research Group, Research Institute of Earthquake and Volcano Geology, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology

*Double circle (◎) indicates a chairperson.

Members of the Subcommittee on Nuclear Fuel Safety

Review Members	IKEGAMI Masako	Professor, Professor, Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo
	ITOI Tatsuya	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	UNESAKI Hironobu	Professor, Institute for Integrated Radiation and Nuclear Science, Kyoto University Professor, Socio-Environmental Energy Science Dept., Graduate School of Energy Science, Kyoto University
	KIRISHIMA Akira	Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University
	KUROSAKI Ken	Professor, Director, Research Center for Safe Nuclear System, Institute for Integrated Radiation and Nuclear Science, Kyoto University
	KOSUGA Atsuko	Professor, Osaka Prefecture University Graduate School of Science
	SAITO Takumi	Professor, Nuclear Professional School, The Graduate School of Engineering, The University of Tokyo
	SADAMATSU Jun	Project Associate Professor, Komaba Organization for Educational Excellence, College of Arts and Sciences, The University of Tokyo

	SAWADA Akira	Executive Director, Japan Accreditation Board
	SUMI Minako	Head, Radiation Oncology Department, Tokyo Metropolitan Geriatric Medical Center
	TAKAGI Ikuji	Professor, Graduate School of Engineering, Kyoto University
	NAKAMURA Takehiko◎	Research Officer, Sector of Nuclear Safety Research and Emergency Preparedness, Japan Atomic Energy Agency
	HISADA Yoshiaki	Professor, Department of Urban Design and Planning, School of Architecture, Kogakuin University
	YOSHIDA Hiroko	Research Professor, Research Center for Accelerator and Radioisotope Science, Tohoku University
	YOSHIHASHI Sachiko	Professor, Facility for Nuclear Materials, Nagoya University, Tokai National Higher Education and Research System
	WATANABE Naoko	Professor, Division of Applied Quantum Science and Engineering, Graduate School of Engineering, Hokkaido University

*Double circle (◎) indicates a chairperson.

(3) Joint Review Meetings of the Reactor Safety Examination Committee and the Nuclear Fuel Safety Examination Committee, etc.

Achievements to Hold Meetings of the Reactor Safety Examination Committee (RSEC) and the Nuclear Fuel Safety Examination Committee (NFSEC)

RSEC No.	NFSEC No.	Date	Agenda
23 Joint	29 Joint	Oct. 21 to Oct. 23 (documentary)	• Mutual election of the chairperson of the Reactor Safety Examination Committee • Mutual election of the chairperson of the Nuclear Fuel Safety Examination Committee

Achievements to Hold Meetings of the Subcommittee on Reactor Safety (SRS) and the Subcommittee on Nuclear Fuel Safety (SNF)

SRS No.	SNF No.	Date	Agenda
17 Joint	11 Joint	Jun. 28	• Response based on the collection and analysis of information related to accidents and problems that have occurred in Japan and abroad and to regulatory trends in other countries • About nuclear regulatory inspections • Assessment of safety improvements for power reactor facilities • Others
18 Joint	12 Joint	Dec. 16	• Appointment and other matters concerning the selection of the chairpersons of the SRS and the SNF • Performance results and future efforts of the SRS

			and the SNF • Response based on the collection and analysis of information related to accidents and problems that have occurred in Japan and abroad and to regulatory trends in other countries • About nuclear regulatory inspections • Others

Achievements to Hold the Subcommittee on Earthquake and Tsunami Hazards

No.	Date	Agenda
4	Jun. 24	• Results of analysis of findings on earthquakes, tsunamis and other disasters collected by the NRA Secretariat • Others

Achievements to Hold the Subcommittee on Volcanic Hazards

No.	Date	Agenda
13	Nov. 13	• Evaluation by the NRA on the results of volcano monitoring by power reactor installers and nuclear fuel facility operators • Results of collection and analysis of information related to findings on volcanic events • Others

Investigation and Deliberations Delegated by the NRA to the Reactor Safety Examination Committee (RSEC) and the Nuclear Fuel Safety Examination Committee (NFSEC)

The NRA shall investigate and deliberate the following matters and provide advice related to the safety of reactors or nuclear fuel materials.

1. Status of response by the NRA based on the collection and analysis of information related to accidents and troubles that have occurred in Japan and overseas, and regulatory trends in other countries
2. Status of implementation of nuclear regulation inspections by the NRA and operators
3. Status of responses by the NRA and operators based on the “Review of approach to evaluation systems for safety improvement of power reactor facilities and the operation thereof” dated July 5, 2024
4. Evaluation by the Secretariat of the NRA on the results of volcano monitoring by power reactor installers or nuclear fuel facility operators
5. Status of response by the NRA based on the collection and analysis of information on disasters that have occurred in Japan and overseas concerning events such as earthquakes and tsunamis and on findings announced by government agencies, etc.
6. Status of response by the NRA based on the collection and analysis of information on

disasters that have occurred in Japan and overseas concerning volcanic events and on findings announced by government agencies, etc.

(4) Radiation Council

Overview

The NRA has established the Radiation Council, based on the law (Law No. 162 of 1958) related to technical standards for prevention of radiation hazards. The purpose of the Radiation Council is to ensure uniformity in technical standards for prevention of radiation hazards.

In FY 2024, the General Meeting was held five times, and a Subcommittee on Space Radiation Protection for Aircraft Crew, etc. was established and convened once.

Furthermore, regarding the adoption of the ICRP 2007 Recommendations into domestic systems, two subcommittees were established concerning effective dose coefficients, one for external exposure and the other for internal exposure.

Members of the Council

Members	IIMOTO Takeshi	Professor, Division for Environment, Health and Safety, The University of Tokyo
	ISHII Tetsuro	Head of Safety Section, Neutron Science and Technology Center, Comprehensive Research Organization for Science and Society
	OISHI Waka	Manager, Department of Clinical Studies, Radiation Effects Research Foundation
	OHNO Kazuko	Professor, Department of Radiological Technology, Faculty of Medical Science, Kyoto College of Medical Science
	KAI Michiaki◎	Professor, Department of Health and Medical Sciences, Nippon Bunri University
	KISHIMOTO Atsuo	Professor, The University of Osaka D3 Center, Director of Research Center on Ethical, Legal and Social Issues
	KURIHARA Osamu	Manager, Department of Radiation Measurement and Dose Assessment, the National Institute of Radiological Sciences, National Institutes for Quantum Science and Technology
	TAKATA Ayako	Professor and Chair, Preventive Medicine, St. Marianna University School of Medicine
	TAKADA Chie	Director, Nuclear Fuel Cycle Engineering Laboratories, Japan Atomic Energy Agency
	TAKAHASHI Fumiaki	Deputy Director, Nuclear Emergency Assistance and Training Center, Nuclear Safety and Emergency Preparedness Institute, Japan Atomic Energy Agency
	TANIKAWA	Director of Futaba Medical Center, Fukushima

	Koichi	Prefecture and Director of Affiliated Hospital Specially Appointed Professor, Fukushima Medical University, Professor Emeritus, Hiroshima University
	NAKAMURA Nobutaka	Senior Councilor, Radiopharmaceuticals Division, Japan Radioisotope Association
	HOSONO Makoto○	Professor, Department of Radiology, Kindai University Faculty of Medicine
	MATSUDA Naoki	Professor Emeritus, Nagasaki University
	YOKOYAMA Sumi	Professor, Atom Bomb Disease Institute, Nagasaki University
	YOSHIDA Hiroko	Research Professor, Research Center for Accelerator and Radioisotope Science, Tohoku University

*Double circle (◎) indicates a chairperson, and circle (○) indicates the deputy to the chairperson.

Members of the Subcommittee on Review of Cosmic Radiation Protection for Aircraft Crew, etc.

Members	OHNO Kazuko○	Professor, Department of Radiological Technology, Faculty of Medical Science, Kyoto College of Medical Science
	KURIHARA Osamu	Manager, Department of Radiation Measurement and Dose Assessment, the National Institute of Radiological Sciences, National Institutes for Quantum Science and Technology
	MATSUDA Naoki◎	Professor Emeritus, Nagasaki University
Expert Members	OUMI Naomi	Director, Wellness Promotion Department, Human Resources Division, and Flight Crew Wellness Promotion Department, Operations Division, Japan Airlines Co., Ltd.
	KUROKI Takashi	Manager, Employee Relations Department, All Nippon Airways Co., Ltd.
	GOMI Hideho	Executive Director, Japan Aeromedical Research Center
	SATO Tatsuhiko	JAEA Fellow, Nuclear Science and Engineering Center, Japan Atomic Energy Agency
	YASUDA Hiroshi	Professor, Research Institute for Radiation Biology and Medicine, Hiroshima University

* Double circle (◎) indicates a chairperson, and circle (○) indicates the deputy to the chairperson.

Members of the Subcommittee on Review of Technical Guidelines on External Exposure Assessment Methods (Effective Dose Coefficients, etc.)

Members	TAKAHASHI Fumiaki	Deputy Director, Nuclear Emergency Assistance and Training Center, Nuclear Safety and Emergency Preparedness Institute, Japan Atomic Energy Agency
	YOSHIDA Hiroko	Research Professor, Research Center for Accelerator and Radioisotope Science, Tohoku University

Expert Members	ODA Keiji	Director, Electron Science Institute Professor Emeritus, Kobe University
	SATO Tatsuhiko	JAEA Fellow, Nuclear Science and Engineering Center, Japan Atomic Energy Agency
	HAGIWARA Masayuki	Fundamental Technology Group Leader, NanoTerasu Center, National Institutes for Quantum Science and Technology
	FUJIBUCHI Toshioh	Professor, Division of Medical Quantum Science, Department of Health Sciences, Faculty of Medical Sciences, Kyushu University

Members of the Subcommittee on Review of Technical Guidelines on Internal Exposure Assessment Methods (Effective Dose Coefficients, etc.)

Members	TAKAHASHI Fumiaki	Deputy Director, Nuclear Emergency Assistance and Training Center, Nuclear Safety and Emergency Preparedness Institute, Japan Atomic Energy Agency
	KURIHARA Osamu	Manager, Department of Radiation Measurement and Dose Assessment, the National Institute of Radiological Sciences, National Institutes for Quantum Science and Technology
Expert Members	TANI Kotaro	Specially Appointed Associate Professor, Graduate School of Human Health Sciences, Tokyo Metropolitan Public University
	HOSODA Masahiro	Professor, Department of Radiological Technology, Graduate School of Health Sciences, Hirosaki University
	MASUDA Tsuyoshi	Senior Researcher, Tritium Research Center, Institute for Environmental Sciences

Achievements to Hold Meetings of the Radiation Council

No.	Date	Agenda
161	Apr. 23	• Selection of chairperson and nomination of deputy chairperson • Approach to review on cosmic radiation exposure management for aircraft crew, etc. • Future approach of incorporation of the ICRP 2007 Recommendations into domestic systems (effective dose coefficients, etc.) • Current status of naturally occurring radioactive materials (NORMs) • Others
162	Aug. 6	• Response to indoor radon • Current status of cosmic radiation exposure management for aircraft crew, etc. and future approach • Revision of the Radiation Council Management Rules • International trend of technical standards for prevention of radiation hazards • Others

163	Oct. 29	• Subcommittee on Study of Cosmic Radiation Protection for Aircraft Crew, etc. • Issues and schedule for revision of the report on “Exemption from Regulation of Naturally Occurring Radioactive Materials” • Establishment of technical standards for the prevention of radiation hazards based on the Act on Special Measures Concerning the Handling of Environmental Pollution by Radioactive Materials (Advisory Opinion) • Others
164	Dec. 10	• Future approach of incorporation of the ICRP 2007 Recommendations into domestic systems (effective dose coefficients, etc.) • Follow-up on the revision of equivalent dose limit for the lens of the eye -measures toward reduction of radiation exposure of medical workers and status of radiation exposure dose- • Establishment of technical standards for the prevention of radiation hazards based on the Act on Special Measures Concerning the Handling of Environmental Pollution by Radioactive Materials (Advisory Opinion) • Others
165	Feb. 26	• Subcommittees of the Radiation Council (effective dose coefficients, etc.) • Establishment of the new report on “Basic approach to radiation protection regarding naturally occurring radioactive materials” • Establishment of technical standards for the prevention of radiation hazards based on the Act on Special Measures Concerning the Handling of Environmental Pollution by Radioactive Materials (Advisory Opinion) • Others

Achievements to Hold Meetings of the Subcommittee on Study of Cosmic Radiation Protection for Aircraft Crew, etc.

No.	Date	Agenda
1	Dec. 11	• Selection of the chairperson of the subcommittee and appointment of the deputy chairperson • International trends in cosmic radiation exposure dose management for aircraft crew, etc. • Current status of exposure dose evaluation for aircraft crew • Current status of efforts by air carriers, etc. • Estimation of exposure doses for passengers • Summary of issues

(5) National Research and Development Agency Council

Overview

Based on the Act on General Rules for Incorporated Administrative Agencies (Act No. 103, 1999), the NRA, a competent administrator is required to hear R&D-related council’s opinions regarding part of work by the National Institutes for Quantum Science and Technology (QST) and the Japan Atomic Energy Agency

(JAEA) before providing them with instructions regarding their medium to long-term goals and evaluate their performance. Therefore, the NRA established the National Research and Development Agency Council on April 10, 2015, as the council for R&D.

In FY 2024, the QST Subcommittee Meeting was held twice to hear opinions including performance evaluation of the QST in FY 2023 and summarized the results.

Furthermore, the Japan Atomic Energy Agency (JAEA) subcommittee meeting was held twice in total to hear and compile opinions on the evaluation of the operational performance in FY 2023 by the JAEA.

Members of the Council

Members	OTOMO Yasuhiro	Director, NHO Disaster Medical Center
	KOSHIZUK A Seiichi◎	Professor, The Graduate School of Engineering, The University of Tokyo
	HOSOYA Noriko	Associate professor, The Center for Disease Biology and Integrative Medicine (CDBIM), Graduate School of Medicine, The University of Tokyo
	YAMAMOTO Akio	Professor, Graduate School of Engineering, Nagoya University, Tokai National University Corporation
	YOKOTA Eri	Professor, Faculty of Business and Commerce, Keio University
	YOKOYAMA Sumi○	Professor, Atomic Bomb Disease Institute, Nagasaki University

*Double circle (◎) indicates a chairperson, and circle (○) indicates the deputy to the chairperson.

Members of the Subcommittee of the National Institutes for Quantum Science and Technology

Members	OTOMO Yasuhiro	Director, NHO Disaster Medical Center
	HOSOYA Noriko	Associate professor, The Center for Disease Biology and Integrative Medicine (CDBIM), Graduate School of Medicine, The University of Tokyo
	YOKOYAMA Sumi◎	Professor, Atomic Bomb Disease Institute, Nagasaki University

*Double circle (◎) indicates a chairperson.

Members of the Subcommittee of the Japan Atomic Energy Agency

Members	KOSHIZUKA Seiichi◎	Professor, The Graduate School of Engineering, The University of Tokyo
	YAMAMOTO Akio	Professor, Graduate School of Engineering, Nagoya University, Tokai National University Corporation
	YOKOTA Eri	Professor, Faculty of Business and Commerce, Keio University

*Double circle (◎) indicates a chairperson.

Achievements to Hold Meetings of the Subcommittee of the National Institutes for Quantum Science and Technology

No.	Date	Agenda
19	Jul. 9	• Evaluation concerning the operational performance of the National Institutes for Quantum Science and Technology in FY 2023 (co-jurisdictional part of the NRA) • Others
20	Jul. 29	• Summary of opinions on the evaluation of the operational performance of the National Institutes for Quantum and Radiological Science and Technology in FY 2023 (part under the joint jurisdiction of the NRA) (draft) • Others

Achievements to Hold Meetings of the Subcommittee of the Japan Atomic Energy Agency

No.	Date	Agenda
22	Jul. 18	• Evaluation of operational performance in FY 2023 • Technical support for nuclear safety regulatory administration along with budget, personnel and other items for safety research thereof • Others
23	Jul. 25 to Jul. 26	• Compilation of opinions on operational performance in FY 2023 (documentary review)

2. Review Meeting

(1) Review Meeting on Conformity to the New Regulatory Requirements

Overview

Based on the new regulatory requirements for nuclear power plants that took effect on July 8, 2013, and the new regulatory requirements for nuclear fuel cycle facilities, etc. that took effect on December 18, 2013, applications for permission for change in basic design submitted by the nuclear operators were reviewed. The reviews were conducted by NRA Commissioners and a study team organized by the Secretariat of the NRA. In FY 2024, 89 review meetings were held for nuclear power plants including a document review and 29 meetings were held for nuclear fuel cycle facilities, etc.

Review Meeting on Conformity to the New Regulatory Requirements for Nuclear Power Plants

Nuclear Regulation	SUGIYAMA Tomoyuki	NRA Commissioner

Authority	ISHIWATARI Akira	NRA Commissioner (attending until the 1282nd meeting)
	YAMAOKA Koshun	NRA Commissioner (attending since the 1284th meeting)
Secretariat of the NRA	OHSIMA Toshiyuki	Director-General, Nuclear Regulation Department
	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats
	WATANABE Keiichi	Director for Nuclear Regulation (in charge of licensing for nuclear power plants)
	NISHIZAKI Takanori	Director for Nuclear Regulation (in charge of licensing for long term operation of nuclear power plants) (attending since the 1268th meeting)
	NAITO Hiroyuki	Director for Nuclear Regulation (in charge of examining measures against earthquake and tsunami)
	NEZUKA Takayoshi	Director for Regulation of Nuclear Facilities (attending since the 1283th meeting)
	OKU Hirotaka	Director for Regulation of Nuclear Facilities (attended until the 1280th meeting)
	IWASAWA Masaru	Director for Regulation of Nuclear Facilities
	SAITO Tetsuya	Director for Regulation of Nuclear Facilities
	NAGURA Shigeki	Director for Regulation of Nuclear Facilities
	TADAUCHI Itsuo	Director for Regulation of Nuclear Facilities
	SHINO Tomohiro	Nuclear Regulation Research Officer
	NAKAGAWA Jun	Nuclear Regulation Research Office (attending since the 1268th Meeting)
	AMANO Naoki	Nuclear Regulation Research Officer
	IWATA Junichi	Nuclear Regulation Research Officer
	MITSUI Katsuhito	Nuclear Regulation Research Officer
	NODA Tomoki	Planning and Research Officer
	EZAKI Junichi	Planning and Research Officer
	ONO Yuji	Research Official for Nuclear Regulation Systems

Members of Review Meeting on Conformity to New Regulatory Requirements for Nuclear Fuel Cycle Facilities, etc.

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner (attending until the 532nd meeting)
	NAGASAKI Shinya	NRA Commissioner (attending since the 534th meeting)
	SUGIYAMA Tomoyuki	NRA Commissioner
	ISHIWATARI Akira	NRA Commissioner (attending until the 517th meeting)
Secretariat of the NRA	OHSIMA Toshiyuki	Director-General, Nuclear Regulation Department
	KINJYO Shinji	Director-General for Nuclear Regulation, Director-

		General's Secretariats
	SHIMA Masakazu	Director for Nuclear Regulation (in charge of licensing for research reactors, use of nuclear materials) (attended until the 528th meeting)
	KOYAMADA Takumi	Director for Nuclear Regulation (in charge of licensing for research reactors) (attending since the 529th meeting)
	HASEGAWA Kiyomitsu	Director for Nuclear Regulation (in charge of reviewing nuclear fuel facilities)
	NAITO Hiroyuki	Director for Nuclear Regulation (in charge of examining measures against earthquake and tsunami)
	ARAKAWA Ichiro	Nuclear Regulation Research Officer
	INOMATA Katsumi	Nuclear Regulation Research Officer
	SAWADA Tomohiro	Nuclear Regulation Research Office (attending since the 539th meeting)
	IWATA Junichi	Nuclear Regulation Research Officer
	MITSUI Katsuhito	Nuclear Regulation Research Officer
	KURISAKI Hiroshi	Planning and Research Officer
	SHIBUTANI Tomoki	Planning and Research Officer (attending since the 533rd Meeting)
	KOSAKU Yasuo	Planning and Research Officer (attended until the 525rd meeting)
	KIHARA Shoji	Planning and Research Officer (attending since the 536th meeting)
	EZAKI Junichi	Planning and Research Officer

(2) Review Meeting on Decommissioning of Nuclear Facilities

Overview

Review Meetings on Decommissioning of Nuclear Facilities are held with the attendance of NRA Commissioners and NRA Secretariat staff to review the decommissioning plans of the nuclear facilities. In FY 2024, the Review Meeting was held three times on nuclear power plants and 13 times on nuclear fuel facilities, etc.

Members of Review Meeting on Decommissioning Plan for Nuclear Power

Reactor Facilities

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner
Secretariat of the NRA	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats
	WATANABE Keiichi	Director for Nuclear Regulation (in charge of licensing for nuclear power plants)
	IWASAWA Masaru	Director for Regulation of Nuclear Facilities

Members of the Review Meeting on Decommissioning Plan for Nuclear Fuel Facilities, etc.

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner (attending until the 37th meeting)
	NAGASAKI Shinya	NRA Commissioner (attending since the 38th meeting)
Secretariat of the NRA	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats
	SHIMA Masakazu	Director for Nuclear Regulation (in charge of licensing for research reactors, use of nuclear materials) (attended until the 33rd meeting)
	KOYAMADA Takumi	Director for Nuclear Regulation (in charge of licensing for research reactors) (attending since the 34th meeting)
	ARAKAWA Ichiro	Nuclear Regulation Research Officer
	KURISAKI Hiroshi	Planning and Research Officer
	SHIBUTANI Tomoki	Planning and Research Officer (attending since the 40th meeting)

(3) Review Meeting on Containers for Transportation and Specified Containers for Spent Fuel Storage Facilities

Overview

Review Meeting on Containers for Transportation and Specified Containers for Spent Fuel Storage Facilities are held with the attendance of a study team consisting of the NRA Secretariat staff. In FY 2024, 2 review meetings were held.

Members of the Review Meeting

Secretariat of the NRA	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats
	HASEGAWA Kiyomitsu	Director for Nuclear Regulation (in charge of reviewing nuclear fuel facilities)
	MATSUMOTO Hisashi	Planning and Research Officer (attended until the 17th meeting)
	KIHARA Shoji	Planning and Research Officer (attending since the 18th meeting)

(4) Review Meeting on Long-Term Facility Management Plan of Commercial Power Reactors

Overview

A system consisting of the NRA Secretariat staff is established and is holding review meetings on application for approval of Long-Term Facility Management

Plan submitted by operators. In FY 2024, 17 review meetings were held.

Members of the Review Meeting

Secretariat of the NRA	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats Director for Nuclear Regulation (in charge of licensing for long term operation of nuclear power plants) (appointed as concurrent official until 7th meeting)
	WATANABE Keiichi	Director for Nuclear Regulation (in charge of licensing for nuclear power plants) (attended until the 7th meeting)
	NISHIZAKI Takanori	Director for Nuclear Regulation (in charge of licensing for long term operation of nuclear power plants) (attending since the 8th meeting)
	TSUKABE Nobuyuki	Director for Regulation of Nuclear Facilities
	ONO Yuji	Research Official for Nuclear Regulation Systems

(5) Review Meeting on Type Certification, etc. of Specific Dual-Use Cask Design Overview

A system consisting of staff from the NRA has been established and is holding a Review Meeting on Type Certification, etc. of Specific Dual-Use Cask Design. In FY 2024, 4 review meetings and 2 documentary reviews were held.

Members of the Review Meeting

Secretariat of the NRA	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats
	WATANABE Keiichi	Director for Nuclear Regulation (in charge of licensing for nuclear power plants) (attended until the 31st meeting)
	NISHIZAKI Takanori	Director for Nuclear Regulation (in charge of licensing for long term operation of nuclear power plants) (attending since the 32nd meeting)
	IWASAWA Masaru	Director for Regulation of Nuclear Facilities (attended until the 32nd meeting)
	NEZUKA Takayoshi	Director for Regulation of Nuclear Facilities (attending since the 33rd meeting)

3. Study Teams

(1) Technical Study Team on Environmental Radiation Monitoring

Overview

In order to conduct appropriate radiation monitoring during emergencies as well as during normal times, it is important to establish a technological base for monitoring, reviewing monitoring methods, and maintaining monitoring skills. In

order to continuously study monitoring technology, the Technical Study Team on Environmental Radiation Monitoring consisting of Commissioner BAN Nobuhiko and external experts was formed, under which two meetings were held in FY 2024.

Members of the Study Team

Nuclear Regulation Authority	BAN Nobuhiko	NRA Commissioner
External experts	KUDO Toshiaki	Director, Aomori Prefecture Nuclear Power Safety Center
	KUROSAWA Tadahiro	Deputy Director, Research Institute for Measurement and Analytical Instrumentation, National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology
	SATO Kuri	Radiation Measurement Technology Section, Department of Radiation Protection, Nuclear Science Research Institute, Japan Atomic Energy Agency
	TAKADA Hyoe	Associate Professor, Institute of Environmental Radioactivity, Fukushima University
	TAKEISHI Minoru	Technical Advisor, Nuclear Emergency Assistance and Training Center, Nuclear Safety and Emergency Preparedness Institute, Japan Atomic Energy Agency
	NISHIZAWA Hiroshi	Professor, Department of Applied Nuclear Technology, Faculty of Engineering, Fukui University of Technology
	HACHISUKA Akiko	Senior Researcher, Division of Organic Chemistry, National Institute of Health Sciences
	HAMAMATSU Shioka	Director-General, Tokyo Metropolitan Agriculture and Forestry Research Center, Tokyo Development Foundation for Agriculture and Forestry and Fishery
	YAMADA Takahiro	Professor, Kindai University Atomic Energy Research Institute
Secretariat of the NRA	KOJIMA Youhei	Director-General for Radiation Protection Strategy and Security
	KAWAGUCHI Etsuo	Director, Radiation Monitoring Division
	KUROKAWA Yoichiro	Director, Radiation Protection Policy Planning Division
	KUBO Yoshiya	Director, Environmental Radioactivity Office
	SASAKI Jun	Planning Officer, Radiation Monitoring Division
	TAKAHASHI Tomoyuki	Chief Officer of Technical Research and Investigation, Division of Research for Radiation Protection and Radioactive Waste Management
	SAKAI Hirotaka	Senior Researcher, Division of Research for Radiation Protection and Radioactive Waste Management
	YUNOKI Akira	Chief Researcher, Division of Research for Radiation Protection and Radioactive Waste Management

(2) Safety Oversight Team for Tokai Reprocessing Facility and Other Facilities

Overview

Six meetings of this Oversight Team, which consists of an NRA Commissioner, the NRA Secretariat staff and others, were held in FY 2024 to continuously check the state of implementing measures for risk reduction such as vitrification, safety measures and decommissioning at the Tokai Reprocessing Plant, Nuclear Fuel Cycle Engineering Laboratories, Japan Atomic Energy Agency.

Members of the Study Team

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner (attending until the 78th meeting)
	NAGASAKI Shinya	NRA Commissioner (attending since the 79th meeting)
Secretariat of the NRA	OHSIMA Toshiyuki	Director-General, Nuclear Regulation Department
	SHIMA Masakazu	Director for Nuclear Regulation (in charge of licensing for research reactors, use of nuclear materials) (attended until the 75th meeting)
	KOYAMADA Takumi	Director for Nuclear Regulation (in charge of licensing for research reactors) (attending since the 76th meeting)
	KURISAKI Hiroshi	Planning and Research Officer
	OZAWA Takahiro	Planning and Research Officer (attending since the 78th meeting)

(3) Safety Oversight Team for Prototype Fast Breeder Reactor MONJU

Decommission

Overview

The Safety Oversight Team, which consists of NRA Commissioners, the NRA Secretariat staff and others, was formed in January 2017 in order to continuously check the state of decommissioning of the JAEA's Prototype Fast Breeder Reactor MONJU and its activities. In FY 2024, five meetings were held under the team.

Members of the Study Team

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner (attending until the 47th meeting)
	NAGASAKI Shinya	NRA Commissioner (attending since the 48th meeting)
Secretariat of the NRA	OHSIMA Toshiyuki	Director-General, Nuclear Regulation Department
	SHIMA Masakazu	Director for Nuclear Regulation (in charge of licensing for research reactors) (attended until the 45th meeting)
	KOYAMADA	Director for Nuclear Regulation (in charge of

	Takumi	licensing for research reactors) (attending since the 46th meeting)
	TORIEDA Hiroaki	Director, Fire Management Office (attending since the 48th meeting)
	KURISAKI Hiroshi	Planning and Research Officer
	OZAWA Takahiro	Planning and Research Officer (attending since the 48th meeting)

(4) JAEA Back-End Measures Monitoring Team

Overview

A monitoring team consisting of the NRA commissioners and the NRA Secretariat staff was established in May, 2019 in order to handle comprehensive problems concerning back-end measures throughout JAEA, including decommissioning of aging nuclear facilities and management of radioactive waste, etc. of JAEA. In FY 2024, two meetings were held.

Members of the Study Team

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner (attending until the 9th meeting)
	NAGASAKI Shinya	NRA Commissioner (attending since the 10th meeting)
Secretariat of the NRA	OHSHIMA Toshiyuki	Director-General, Nuclear Regulation Department
	SHIMA Masakazu	Director for Nuclear Regulation (in charge of licensing for research reactors, use of nuclear materials) (attended until the 8th meeting)
	KOYAMADA Takumi	Director for Nuclear Regulation (in charge of licensing for research reactors) (attending since the 9th meeting)
	ARAKAWA Ichiro	Director for Safety Regulation (attended until the 8th meeting)
	SHIBUTANI Tomoki	Planning and Research Officer (attending since the 10th meeting)
	OZAWA Takahiro	Planning and Research Officer (attending since the 10th meeting)

(5) Study Team on Technical Evaluation of JSME (the Japan Society of Mechanical Engineers) Code for Design and Construction, Materials and Welding

Overview

The Study Team, which consists of the NRA Commissioner, the NRA Secretariat staff, external experts and others, held its meetings once in FY 2024 for the technical evaluation of JSME Standards for design and construction, materials and welding.

Members of the Study Team

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner
External experts	OTSUKA Yuichi	Associate Professor, Graduate School of Technology, Nagaoka University of Technology
	FUKAZAWA Tsuyoshi	Professor, Department of Mechanical Engineering, Graduate School of Engineering, Tokyo Denki University
	FURUKAWA Takashi	Director, Nondestructive Evaluation Center, Japan Power Engineering and Inspection Corporation
Safety Research Center, JAEA	CHIMI Yasuhiro	Leader of Aging and Deterioration Research Group
	YAMAGUCHI Yoshihito	Deputy Director of Research, Aging and Deterioration Research Group
Secretariat of the NRA	SATO Gyou	Director General for Regulatory Standard and Research Department
	TOHYAMA Makoto	Director, Regulatory Standard and Research Division
	SASAKI Haruko	Planning and Coordinating Officer, Regulatory Standard and Research Division
	KOJIMA Masayoshi	Chief Officer of Technical Research and Investigation, Division of Research for Reactor System Safety, Regulatory Standard and Research Department
	TAGUCHI Kiyotaka	Chief Researcher, Division of Research for Reactor System Safety, Regulatory Standard and Research Department
	MIZUTA Kouhei	Safety Technology Expert, Division of Research for Reactor System Safety, Regulatory Standards and Research Department
	AZUMA Kisaburou	Deputy Chief Researcher, Division of Research for Earthquakes and Tsunamis
	MIYAZAKI Tsuyoshi	Planning and Research Officer, Division of Specified Oversight
	SAKAI Reina	Inspection Technology Specialist, Division of Specified Oversight
	SAWADA Atsuo	Technical Consultant
	KIKUCHI Masaaki	Technical Consultant
	TAKAKURA Kenichi	Technical Consultant
	FUJISAWA Hiromi	Technical Consultant

(6) Study Team on Technical Evaluation of the Japan Electric Association Standards concerning the Surveillance Test Practice for Reactor Vessel Structure Material and Fracture Toughness Verification Test Practice Overview

The Study Team, which consists of the NRA Commissioner, the NRA Secretariat

staff, external experts, and others, held its meetings three times in FY 2024 for the technical evaluation of the Japan Electric Association Standards concerning the Surveillance Test Practice for the Reactor Vessel Structure Material and the Fracture Toughness Verification Test Practice for Nuclear Power Plant Equipment.

Members of the Study Team

Nuclear Regulation Authority	SUGIYAMA Tomoyuki	NRA Commissioner
External experts	MUTA Hiroaki	Professor, Division of Sustainable Energy and Environment Engineering, Graduate School of Engineering, The University of Osaka
	FURUKAWA Takashi	Director, Nondestructive Evaluation Center, Japan Power Engineering and Inspection Corporation
Safety Research Center, JAEA	TAKAMIZAWA Yu	Deputy Director of Research, Aging and Deterioration Research Group
	YAMAGUCHI Yoshihito	Deputy Director of Research, Aging and Deterioration Research Group
	ONIZAWA Kunio	Research Officer
Secretariat of the NRA	MORISHITA Yasushi	Director general for Regulatory Standard and Research Department
	KAMITANI Koji	Director, Regulatory Standard and Research Division
	SASAKI Haruko	Planning and Coordinating Officer, Regulatory Standard and Research Division
	KOJIMA Masayoshi	Chief Officer of Technical Research and Investigation, Division of Research for Reactor System Safety, Regulatory Standard and Research Department
	HOJO Tomohiro	Chief Researcher, Division of Research for Reactor System Safety, Regulatory Standard and Research Department
	OKITA Taira	Chief Researcher, Division of Research for Reactor System Safety, Regulatory Standard and Research Department
	WATANABE Aiki	Safety Technology Expert, Division of Research for Reactor System Safety, Regulatory Standards and Research Department
	AZUMA Kisabourou	Chief Researcher, Division of Research for Earthquakes and Tsunamis
	TSUKAMOTO Naofumi	Senior Researcher, Division of Research for Severe Accidents, Regulatory Standard and Research Department
	FUJISAWA Hiromi	Technical Consultant
	FUNADA Tatsuo	Technical Consultant
	KONO Katsumi	Technical Consultant

(7) Study Team on Safety Regulations for Aging Power Reactors

Overview

The Study Team Meeting consisting of NRA Commissioners and NRA Secretariat staff was established in February 2023 in order to study safety regulations for aging nuclear power reactors. The first meeting was held in FY 2024.

Members of the Study Team on Safety Regulations for Aging Power Reactors

Nuclear Regulation Authority	SUGIYAMA Tomoyuki	NRA Commissioner
Secretariat of the NRA	OHSIMA Toshiyuki	Director-General, Nuclear Regulation Department
	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats
	TAKEUCHI Jun	Director, Nuclear Regulation Policy Planning Division
	TERUI Hiroyuki	Deputy Director, Nuclear Regulation Policy Planning Division
	TSUKABE Nobuyuki	Director for Regulation of Nuclear Facilities, Division of Long-Term Operation of Nuclear Power Plants

(8) Study team on operation of sheltering in place in the event of nuclear emergency.

Overview

The Study Team Meeting, which consists of NRA Commissioners, NRA Secretariat staff, Cabinet Office staff, external experts, and local government officials, was held nine times in FY 2024 in order to study the most effective implementation of sheltering in place.

Members of the Study Team

Nuclear Regulation Authority	BAN Nobuhiko	NRA Commissioner
	SUGIYAMA Tomoyuki	NRA Commissioner
Secretariat of the NRA	KOJIMA Youhei	Director-General for Radiation Protection Strategy and Security (Director of the Radiation Protection Department)
	NITTA Akira	Director, Radiation Protection Policy Planning Division (attended until the 3rd meeting)
	KUROKAWA Yoichiro	Director, Radiation Protection Policy Planning Division (attending since the 4th meeting)
	YAMAMOTO Tetsuya	Radiation Protection Technology Coordinating Officer, Radiation Protection Policy Planning

		Division
	KATO Takayuki	Planning and Research Officer, Radiation Protection Policy Planning Division
	YUZAWA Masaharu	Deputy Director, Radiation Protection Policy Planning Division (attended until the 7th meeting)
	MOTOMITSU Kunihiro	Nuclear Disaster Management Specialist, Radiation Protection Policy Planning Division
	YAMAMOTO Chihiro	Chief, Protective Measures and Strategy Section, Radiation Protection Policy Planning Division (attending since the 6th meeting)
	HONMA Toshimitsu	Technical Consultant, Radiation Protection Policy Planning Division
	SUGIMOTO Takanobu	Director, Emergency Preparedness and Response Office
	KAWASAKI Kenji	Director for Policy Planning and Coordination, Emergency Preparedness and Response Office
	HOSHI Harutaka	Senior Researcher, Division of Research for Severe Accident, Regulatory Standard and Research Department
	SUZUKI Chihiro	Deputy Chief Researcher, Division of Research for Severe Accident, Regulatory Standard and Research Department
	WATANABE Keiichi	Director for Nuclear Regulation (in charge of licensing for nuclear power plants)
	SORIMACHI Kounosuke	Deputy Director, Division of Licensing for Nuclear Power Plants
Nuclear Disaster Management Bureau, Cabinet Office	MAEDA Mitsuya	Director General for Nuclear Regulation (in charge of nuclear disaster management) (attended until the 3rd meeting)
	YOSHIDA Dai	Director for Planning and International Affairs (attending since the 4th meeting)
	NEGI Keizo	Director for Regional Disaster Prevention (attended until the 3rd meeting)
	HASE Hiroshi	Director for Regional Disaster Prevention (attending since the 4th meeting)
External experts	KURIHARA Osamu	National Institutes for Quantum and Radiological Science and Technology Manager, Department of Radiation Measurement and Dose Assessment, the National Institute of Radiological Sciences
	TAKAHARA Shogo	Japan Atomic Energy Agency Senior Principal Researcher, Nuclear Safety Research Center, Nuclear Safety and Emergency Preparedness Institute
	TSUBOKURA Masaharu	Chief Professor and Chair, Department of Radiation Health Management, School of Medicine, Fukushima Medical University
	MARUYAMA Yu	IAEA Fellow, Japan Atomic Energy Agency (IAEA)
Local government	HASEBE Hiroshi	Director, Nuclear Safety Policy Division, Reconstruction and Crisis Management

officials		Department, Miyagi Prefecture
	FUJIMURA Hiroaki	Director, Crisis Management Division, Citizen Life Department, Tsuruga City

4. Committees for Specific Research and Study

(1) Committee on Oversight and Evaluation of Specified Nuclear Facilities

Overview

Meetings of the Committee on Oversight and Evaluation of the Specified Nuclear Facilities, consisting of NRA Commissioners, the NRA Secretariat staff, and external experts, were held to evaluate the schedule management and safety measures for decommissioning work of TEPCO's Fukushima Daiichi NPS and to give necessary advice. In FY 2024, 5 meetings were held.

Members of the Committee

Nuclear Regulation Authority	BAN Nobuhiko	NRA Commissioner
	TANAKA Satoru	NRA Commissioner (attended until the 113th meeting)
	NAGASAKI Shinya	NRA Commissioner (attending since the 114th meeting)
external experts	IGUCHI Tetsuo	Professor Emeritus, Nagoya University
	KITTAKA Yoshinori	Professor, Department of Architecture, Faculty of Urban Environmental Sciences, Tokyo Metropolitan University
	TANAKA Seiichiro	President, Futaba Town Reconstruction Promotion Council
	TOKUNAGA Tomochika	Professor, Department of Environment Systems, Graduate School of Frontier Sciences, The University of Tokyo
	HACHISUKA Reiko	Society President of Okuma Town Society of Commerce and Industry
	YAMAMOTO Akio	Professor, Department of Applied Energy Science, Graduate School of Engineering, Nagoya University
Secretariat of the NRA	ICHIMURA Tomoya	Deputy Secretary-General for Technical Affairs
	SATO Gyou	Director-General for Radiation Protection Strategy and Security (attended until the 112th meeting) Regional Administrator (in charge of Fukushima) (attending since the 113th meeting)
	KOGANEYA Toshiyuki	Director-General for Emergency Response (attending since the 113th meeting)
	MINAMIYAMA Rikio	Regional Administrator (in charge of Fukushima) (attended until the 112th meeting)
	IWANAGA Kohei	Director, Office for Accident Measures of the Fukushima-Daiichi NPS

	SHIBUTANI Tomoki	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attended until the 113th meeting)
	MIYAMOTO Kenji	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attending since the 114th meeting)
	MASAOKA Hideaki	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station
	OHTSUJI Ayako	Deputy Director, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attended until the 113th meeting)
	WATANABE Tatsuki	Deputy Director, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attending since the 114th meeting)
	YAMAMOTO Yoshihiro	Director, NRA Regional Office for Fukushima Daiichi Nuclear Power Station
	KOBAYASHI Ryusuke	Technical Consultant, NRA Regional Office for Fukushima Daiichi Nuclear Power Station
	AOKI Hiroomi	Chief Researcher, Division of Research for Radiation Protection and Radioactive Waste Management

(2) Technical Meeting for Review of Implementation Plans for Specific Nuclear Facilities

Overview

The Technical Meeting for Review of Implementation Plans for Specific Nuclear Facilities, which consists of the NRA Commissioner and the NRA Secretariat staff, is held to discuss major technical issues, and to exchange opinions on other technical regulatory issues since prompt reviews are necessary to ensure the steady and immediate progress with decommissioning work and other tasks with regard to the examination of the Implementation Plan with Regards to Fukushima Daiichi NPS's Specified Nuclear Facilities. In FY 2024, the meeting was held 8 times.

Members of the Meeting

Nuclear Regulation Authority	BAN Nobuhiko	NRA Commissioner
	TANAKA Satoru	NRA Commissioner (attended until the 22nd meeting)
	NAGASAKI Shinya	NRA Commissioner (attending since the 23rd meeting)
Secretariat of the NRA	SATO Gyou	Director-General for Radiation Protection Strategy and Security (attended until the 20th meeting)
	KOGANEYA Toshiyuki	Director-General for Emergency Response (attending since the 21st meeting)
	IWANAGA Kohei	Director, Office for Accident Measures of the Fukushima-Daiichi NPS

	SHIBUTANI Tomoki	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attended until the 20th meeting)
	MIYAMOTO Kenji	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attending since the 22nd meeting)
	MASAOKA Hideaki	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station
	OHTSUJI Ayako	Deputy Director, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attended until the 20th meeting)
	WATANABE Tatsuki	Deputy Director, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attending since the 23rd meeting)

(3) Committee on Accident Analysis of the Fukushima Daiichi Nuclear Power Station

Overview

Meetings of the Committee on Accident Analysis of the Fukushima Daiichi Nuclear Power Station, which consists of NRA Commissioners, the NRA Secretariat staff, and external experts and researchers of Japan Atomic Energy Agency were held to examine TEPCO's Fukushima Daiichi NPS accident analysis issues from a technical perspective based on the information obtained from on-site investigation. In FY 2024, 6 meetings were held.

Members of the Committee

Nuclear Regulation Authority	YAMANAKA Shinsuke	NRA Chairman
	TANAKA Satoru	NRA Commissioner (attending until the 47th meeting)
	SUGIYAMA Tomoyuki	NRA Commissioner
	NAGASAKI Shinya	NRA Commissioner (attending since the 48th meeting)
external experts	ICHINO Hiroyoshi	Associate Professor, National Defense Academy of Japan
	OHISHI Yuji	Associate Professor, Graduate School, Osaka University
	URATA Shigeru	General Industries, Ltd Manager, Mitsubishi Heavy
	KADOWAKI Satoshi	Professor, Nagaoka University of Technology
	SATO Fuminobu	Professor, Graduate School, Osaka University
	NINOKATA Hisashi	Professor Emeritus, Tokyo Institute of Technology
	MAEKAWA Osamu	Senior expert, Toshiba Energy Systems and Solutions Corporation

	MIYATA Koichi	Director-General, Atomic Energy Association
	MUTA Hitoshi	Associate Professor, Tokyo City University
	MUTA Hiroaki	Professor, Graduate School, Osaka University
	MURATA Isao	Professor, Graduate School, Osaka University
	YAMAJI Akifumi	Professor, Faculty of Science and Engineering, Waseda University
	YAMANAKA Yasunori	Executive Officer, Nuclear Damage Compensation and Decommissioning Facilitation Corporation
Secretariat of the NRA	SATO Gyou	Director-General for Radiation Protection Strategy and Security (attended until the 46th meeting)
	KOGANEYA Toshiyuki	Director-General for Emergency Response (attending since the 47th meeting)
	TOHYAMA Makoto	Director, Regulatory Standard and Research Division (attended until the 46th meeting)
	KAMITANI Koji	Director, Regulatory Standard and Research Division (attending since the 47th meeting)
	HIRANO Masashi	Technical Consultant, Regulatory Standard and Research Division
	TOCHIO Daisuke	Chief Researcher, Division of Research for Severe Accident, Regulatory Standard and Research Department
	IRIE Masaaki	Researcher, Division of Research for Radiation Protection and Radioactive Waste Management
	IWANAGA Kohei	Director, Office for Accident Measures of the Fukushima-Daiichi NPS
	YASUI Masaya	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attended until the 49th meeting)
	MIYAMOTO Kenji	Planning and Research Officer, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station (attending since the 48th meeting)
	HOSHI Harutaka	Senior Researcher, Division of Research for Severe Accident, Regulatory Standard and Research Department
	TATEBE Yasumasa	Chief Safety Examiner, Division of Licensing for Nuclear Power Plants (attended until the 46th meeting)
Japan Atomic Energy Agency	KAMINOUCHI Hisamitsu	Lecturer, Reactor Technology Training Programs Division, NRA Human Resource Development Center
	MARUYAMA Yu	JAEA Fellow, Sector of Nuclear Safety Research and Emergency Preparedness
	AMAYA Masaki	Director, Nuclear Research Safety Center, Sector of Nuclear Safety Research and Emergency Preparedness

(4) Fukushima Daiichi NPS Decommissioning and Accident Investigation Liaison and Coordination Meeting

Overview

Meetings of the Fukushima Daiichi NPS Decommissioning and Accident

Investigation Liaison and Coordination Meeting consists of the Secretariat of the NRA, which has been conducting related technical research and analysis, as well as the Agency for Natural Resources and Energy, the Nuclear Damage Compensation and Decommissioning Facilitation Corporation and TEPCO, which are responsible for the decommissioning work. The Meetings were held to coordinate work relating to accident analysis and decommissioning work. In FY 2024, the Meeting was held in August.

Members of the Meeting

Agency for Natural Resources and Energy	MIYAZAKI Takaya	Director-General for Nuclear Accident Disaster Response
	TSUTSUMI Masahito	Planning Officer, Director, Nuclear Accident Response Office
	FUSHIMI Tomokazu	Deputy Director, Nuclear Accident Response Office
Secretariat of the NRA	KOGANEYA Toshiyuki	Director-General for Emergency Response
	IWANAGA Kohei	Director, Office for Accident Measures of the Fukushima-Daiichi NPS
	OHTSUJI Ayako	Deputy Director, Office for Accident Measures of Fukushima Daiichi Nuclear Power Station
Nuclear Damage Compensation and Decommissioning Facilitation Corporation	IKENOUE Sanroku	Executive Officer
	NAKAMURA Noriyoshi	Executive Officer
	YAMANAKA Yasunori	Executive Officer
Tokyo Electric Power Company Holdings, Inc.	ABE Moriyasu	Executive Officer, Vice President of Fukushima Daiichi D&D Engineering Company
	IIZUKA Naoto	Chief Technology Officer for D&D, Fukushima Daiichi D&D Engineering Company
	MIZOKAMI Shinya	Research Director, Fuel Debris Retrieval Program Department, Fukushima Daiichi NPS, Fukushima Daiichi D&D Engineering Company

(5) Technical Information Committee

Overview

A meeting of the Technical Information Committee, consisting of an NRA Commissioner, NRA Secretariat division directors and others, is held approximately once every two months with the purpose of organizing and sharing information on accidents and failures that occurred at nuclear power plants in Japan and abroad as well as the latest scientific and technological knowledge and judging the necessity of reflecting them in the regulations. 7 meetings of the

Committee were held in FY 2024.

Members of the Committee

Nuclear Regulation Authority		NRA Commissioner
Secretariat of the NRA		Deputy Secretary-General for Technical Affairs
	Director-General's Secretariat	Director-General for Emergency Response
		Director General for Regulatory Standard and Research Department
		Director-General for Nuclear Regulation (two)
		Director, Office for International Affairs
		Director of Emergency Preparedness and Response Office
	Regulatory Standard and Research Department	Director, Regulatory Standard and Research Division
		Director, Division of Research (in charge of Reactor System Safety)
		Director, Division of Research (in charge of Severe Accidents)
		Director, Division of Research (in charge of Radiation Protection and Radioactive Waste Management)
		Director, Division of Research (in charge of Earthquake and Tsunami)
	Radiation Protection Department	Director, Radiation Protection Policy Planning Division
	Nuclear Regulation Department	Director-General, Nuclear Regulation Department
		Director, Nuclear Regulation Policy Planning Division
		Director, Office for Accident Measures of the Fukushima-Daiichi NPS
	Divisions of Licensing	Director for Nuclear Regulation (in charge of licensing for nuclear power plants)
		Director, Division of Long Term Operation of Nuclear Power Plants
		Director for Nuclear Regulation (in charge of reviewing research reactors, use of nuclear materials)
		Director for Nuclear Regulation (in charge of reviewing nuclear fuel facilities)
		Director for Nuclear Regulation (in charge of examining measures against earthquake and tsunami)
	Division of Oversight	Director, Oversight Planning and Coordination Division
		Director, Division of Oversight of Nuclear Power Plants
		Director, Division of Specified Oversight
		Director, Division of Oversight of Nuclear Fuel Related Facilities and Research Reactors
Japan Atomic Energy Agency	Center Director, Nuclear Safety Research Center	
	Director, Regulatory and International Information Analysis Division	

(6) Technical Evaluation Committees

Overview

In order to obtain technical opinions from external experts and professional

engineers well versed in technological fields for the NRA's prior assessments, interim assessments and post assessments, 11 meetings of the following 8 Technical Evaluation Committees were held in FY 2024.

Technical Evaluation Committee on Plant Safety

External experts	KITADA Takanori	Professor, Graduate School of Engineering, The University of Osaka
	GOFUKU Akio	Vice President, Okayama Prefectural University
	YAMAJI Akifumi	Professor, School of Advanced Science and Engineering, Faculty of Science and Engineering, Waseda University
Professional Engineer	ARAI Kenji	General Manager, Nuclear Safety System Design Department, Isogo Engineering Center, Toshiba Energy Systems Solutions Corporation
	IMURA Satoshi	Deputy General Manager, Core & Safety Engineering Department, Nuclear Energy Segment, Mitsubishi Heavy Industries, Ltd.
	MIZOKAMI Shinya	Research Director, Fuel Debris Retrieval Program Department, Fukushima Daiichi NPS, Fukushima Daiichi D&D Engineering Company, Tokyo Electric Power Company Holdings, Inc.

Members of Technical Evaluation Committee on Nuclear Fuel

External experts	ARIMA Tatsumi	Associate Professor, Graduate School of Engineering, Kyushu University
	KUROSAKI Ken	Professor and Director, Research Center for Safe Nuclear System, Institute for Integrated Radiation and Nuclear Science, Kyoto University
Professional Engineer	OTSUKA Kousuke	General Manager, Decommissioning Office (Risk Officer), Tokyo Electric Power Company Holdings.
	SAKAMOTO Kan	Chief Researcher, Research Department, Nippon Nuclear Fuel Development Co., Ltd.
	TAKABATAKE Hayato	Executive Vice President / Deputy Chief Nuclear Officer (Nuclear Safety and Technology, Nuclear Power Generation, Nuclear Fuel) / Person in charge of Nuclear Fuel Cycle Division (Nuclear Fuel Contract), Kansai Electric Power, Company.

Members of Technical Evaluation Committee on Nuclear Material

External experts	OTSUKA Yuichi	Associate Professor, Graduate School of Engineering, Nagaoka University of Technology
	KURODA Masatoshi	Associate Professor, Faculty of Advanced Science and Technology, Graduate School of Science and Technology, Kumamoto University
Professional Engineer	KAMATANI Masayuki	Senior Researcher, Institute of Nuclear Technology, Institute of Nuclear Safety System, Inc.
	TERACHI Takumi	Leader of Nuclear Power Plant Aging Research Group, Institute of Nuclear Technology, Institute of

		Nuclear Safety System, Inc.

Members of Technical Evaluation Committee on Severe Accident

External experts	ITOI Tatsuya	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	MUTA Hitoshi	Associate Professor, Graduate School of Integrative Science and Engineering, Tokyo City University
	MORITA Koji	Professor, Faculty of Engineering, Graduate School of Engineering, Kyushu University
Professional Engineer	IMURA Satoshi	Deputy General Manager, Core & Safety Engineering Department, Nuclear Energy Segment, Mitsubishi Heavy Industries, Ltd.
	KURAMOTO Takahiro	Deputy General Manager, Analysis Service Division, Nuclear Engineering, Ltd.
	TAHARA Mika	Senior Expert, Safety Systems Engineering Group 2, Nuclear Safety System Design Department, Isogo Engineering Center, Toshiba Energy Systems & Solutions Corporation

Members of Technical Evaluation Committee on Nuclear Fuel Cycle

External experts	ASANUMA Noriko	Associate Professor, Department of Nuclear Engineering, School of Engineering, Tokai University
	KIKURA Hironari	Associate Professor, Institute of Innovative Research, Institute of Science Tokyo
	CHIBA Satoshi	Professor Emeritus, Institute of Science Tokyo
	MURAMATSU Ken	Executive Director, Public Interest Incorporated Foundation Nuclear Safety Technology Center (NUSTEC)
Professional Engineer	NAKABAYASHI Hiroki	Deputy Director of Decommissioning Project Management Office and Decommissioning Technology Group Leader, TRP Decommissioning Center, Nuclear Fuel Cycle Engineering Laboratories, Japan Atomic Energy Agency

Members of Technical Evaluation Committee on Back-End Technology

External experts	IGUCHI Tetsuo	Professor Emeritus, Nagoya University
	NAKARAI Kenichiro	Professor, Graduate School of Advanced Science and Engineering, Hiroshima University
	NIIBORI Yuichi	Professor, Graduate School of Engineering, Tohoku University
Professional Engineer	SUZUKI Satoru	Manager, Engineering Technology Group, Science and Technology Department, Nuclear Waste Management Organization of Japan
	WATANABE Masato	Senior Researcher, Plant Group, Nuclear Safety Technology Research Institute, Technology Development Division, Chubu Electric Power Company.

Members of Technical Committee on Earthquake and Tsunami

External experts	ITOI Tatsuya	Associate Professor, The Graduate School of Engineering, The University of Tokyo
	KAMATAKI Takanobu	Professor, Department of Applied Science, Faculty of Science, Okayama University of Science, Kake Educational Institution
	KIKU Hiroyoshi	Professor, College of Science and Engineering, Kanto Gakuin University
	SAKAI Naoki	Deputy Director-General, Storm, Flood and Landslide Research Division, National Research Institute for Earth science and Disaster resilience
	SHIBUTANI Tadahiro	Professor, Institute for Multidisciplinary Sciences, Yokohama National University
Professional Engineer	UMEKI Yoshito	Manager of Civil & Architectural Engineering Department, Nuclear Power Division, Chubu Electric Power Company.
	TOSHIDA Kiyoshi	R&D Manager, External Natural Event Research Team, Nuclear Risk Research Center, Central Research Institute of Electric Power Industry
	MATSUYAMA Masafumi	Head, External Natural Events Research Team, Nuclear Risk Research Center, Central Research Institute of Electric Power Industry

Members of the Technical Evaluation Committee on Radiation Protection

Technology

External experts	IIMOTO Takeshi	Professor, Division for Environment, Health and Safety, The University of Tokyo
	YASUDA Hiroshi	Professor, Research Institute for Radiation Biology and Medicine, Hiroshima University
	YOKOYAMA Sumi	Professor, Atomic Bomb Disease Institute, Nagasaki University
Professional Engineer	HASHIMOTO Shu	Technical Officer, Security Administration Department, Safety and Nuclear Security Administration Head Office, Japan Atomic Energy Agency
	MUKAIDA Naoki	Director, Radiological Health And Safety Center, Nuclear Safety Management Department, TEPCO

5. Others

(1) NRA Policy Assessment Meeting

Overview

It is a requirement to conduct hearing of opinions from external experts regarding policy evaluation conducted by the NRA. The Meeting was held twice in FY 2024 to hear opinions on policy evaluation and the NRA's medium-term goals for the third period.

Members of the Meeting

external experts	IIZUKA Yoshinori	Professor Emeritus, The University of Tokyo
	OHYA Takehiro	Professor, Faculty of Law, Keio University
	KAMEI Zentaro	Chief Research Fellow, PHP Research Institute Specially Appointed Professor, Graduate School of Social Design Studies, Rikkyo University
	SHIROYAMA Hideaki	Professor, Graduate School of Public Policy, The University of Tokyo Professor, Graduate Schools for Law and Politics, The University of Tokyo
	FUJITA Yukiko	Professor, Faculty of Law, Gakushuin University
	MACHI Asei	Freelance journalist

(2) Meeting of external experts on the NRA's Administrative Project Review

Overview

In the administrative project review, all ministries and government offices are required to clarify the status of implementation of all their projects, taking into account external opinions. Furthermore, as part of the review, an expert meeting shall be held for some of the projects for hearing external experts' opinions on problems and methods for improvement. In FY 2024, the External Expert Meeting was held four times, including the public process.

Members of the Meeting

External experts from the NRA	IJJIMA Hirokuni	Professor, Faculty of Economics, Chuo University
	NAJIMA Kazuhisa	Professor, Faculty of Policy Science, Ryukoku University
	YOSHIDA Takeshi	Certified Public Accountant, Partner, Avantia GP
External experts from the Headquarters for Promotion of Administrative Reform, Cabinet Secretariat	OHASHI Hiroshi	Professor, Graduate Schools of Economics, The University of Tokyo
	SATO Motohiro	Professor, School of International and Public Policy, Hitotsubashi University
	NAGAHISA Toshio	Professor, Department of Economics, Nagoya University of Commerce & Business

(3) Meeting on Hearing Opinions of Operators regarding New Regulatory Requirements

Overview

This meeting is held on an irregular basis whenever a necessity arises to publicly hear operators' opinions on the new regulatory requirements. In FY 2024, the Meeting was held once to discuss intergranular cracking of stainless-steel piping in the primary system of PWRs and once to discuss electromagnetic compatibility at nuclear power plants.

Members of the Meeting

- Intergranular Cracking of Stainless-Steel Piping in the PWR Primary System (August 22, 2024)

Secretariat of the NRA	MORISHITA Yasushi	Director-General for Nuclear Regulation, Director-General's Secretariats
	KAMITANI Koji	Director, Regulatory Standard and Research Division
	SASAKI Haruko	Planning and Coordinating Officer, Regulatory Standard and Research Division
	CHIMI Yasuhiro	Deputy Director, Regulatory Standard and Research Division
	KOJIMA Masayoshi	Chief Officer of Technical Research and Investigation, Division of Research for Reactor System Safety, Regulatory Standard and Research Department
	MORITA Kenji	Senior Executive Specialist for Nuclear Inspection, Division of Specified Oversight
	FUJISAWA Hiromi	Technical Consultant
	KONO Katsumi	Technical Consultant
Safety Research Center, JAEA	HATA Kuniki	Manager of Ageing Management Research Group

- Electromagnetic Compatibility at Nuclear Power Plants (December 17, 2024)

Secretariat of the NRA	KAMITANI Koji	Director, Regulatory Standard and Research Division
	SASAKI Haruko	Planning and Coordinating Officer, Regulatory Standard and Research Division
	SAKAI Hirotaka	Nuclear Regulation Specialist, Regulatory Standard and Research Division
	MINAGAWA Takefumi	Nuclear Regulation Specialist, Regulatory Standard and Research Division
	IKEDA Masaaki	Safety Technology Expert, Division of Research for Reactor System Safety, Regulatory Standards and Research Department
	YUNOKI Akira	Chief Researcher, Division of Research for Radiation

		Protection and Radioactive Waste Management
	IMASE Masahiro	Chief Executive Specialist for Nuclear Inspection, Division of Specified Oversight

(4) the Debriefing Session of Emergency Drills by Nuclear Operators

Overview

Regarding nuclear emergency drills conducted by nuclear operators, the Debriefing Session was held once in FY 2024, led by Commissioners TANAKA and SUGIYAMA with the aim of strengthening information sharing between the Nuclear Regulation Authority and the operators and improving emergency response capabilities.

Members of the Debriefing Session

Nuclear Regulation Authority	TANAKA Satoru	NRA Commissioner
	SUGIYAMA Tomoyuki	NRA Commissioner
Secretariat of the NRA	KOGANEYA Toshiyuki	Director-General for Emergency Response
	SUGIMOTO Takanobu	Director, Emergency Preparedness and Response Office
	TAKASU Yoji	Director, Division of Specified Oversight
	YAMAGUCHI Michio	Director, Accidents Response Office
	AMANO Naoki	Director, Division of Licensing for Nuclear Power Plants
	MURAKAMI Gen	Director, Risk Management Office, Oversight Planning and Coordination Division
	KOSAKU Yasuo	Planning Officer, Policy Planning and Coordination Division
	IWATA Junichi	Nuclear Regulation Research Officer, Division of Licensing for Earthquake and Tsunami
	KAWASAKI Kenji	Director for Policy Planning and Coordination, Emergency Preparedness and Response Office
	HASEGAWA Kiyomitsu	Director for Nuclear Regulation (in charge of reviewing nuclear fuel facilities)
	KOYAMADA Takumi	Director for Nuclear Regulation (in charge of reviewing research reactors, use of nuclear materials)

(5) Exchange of Opinions on the Way of Training and Regulatory Involvement in Emergency Response by Nuclear Operators

Overview

The Exchange of Opinions is being held to discuss with nuclear operators how to improve the effectiveness of the entirety of the measures taken by nuclear

operators for emergency response, including nuclear operators' emergency drills based on the Act on Special Measures Concerning Nuclear Emergency Preparedness and education and drills based on the requirements under the Nuclear Reactor Regulation Law, and how to evaluate such measures in cooperation with nuclear operators. In FY 2024, the Exchange was held twice in total.

Members of the Meeting

Secretariat of the NRA	KOGANEYA Toshiyuki	Director-General for Emergency Response
	SUGIMOTO Takanobu	Director, Emergency Preparedness and Response Office
	TAKASU Yoji	Director, Division of Specified Oversight
	TSURUSAWA Yoji	Director, Division of Nuclear Security
	YAMAGUCHI Michio	Director, Accidents Response Office
	KAWASAKI Kenji	Director for Policy Planning and Coordination, Emergency Preparedness and Response Office
	SEKI Masayuki	Planning and Research Officer, Division of Specified Oversight

(6) Information Exchange Meeting on the Inspection Program

Overview

The meeting was started in April 2020 to exchange information with external experts and nuclear operators for continuous improvement of nuclear regulatory inspections, and one meeting was held in FY 2024.

Members of the Debriefing Session

Nuclear Regulation Authority	NAGASAKI Shinya	NRA Commissioner
	SUGIYAMA Tomoyuki	NRA Commissioner
Secretariat of the NRA	MORISHITA Yasushi	Director-General for Nuclear Regulation, Director-General's Secretariats
	SUGIMOTO Takanobu	Director, Oversight Planning and Coordination Division
	SHIMA Masakazu	Director, Division of Oversight of Nuclear Power Plants
	MURATA Shinichi	Director, Division of Oversight of Nuclear Fuel Related Facilities and Research Reactors
	TAKASU Yoji	Director, Division of Specified Oversight

(7) Working-level Technical Opinion Exchange Meeting

(i) Working-level Technical Opinion Exchange Meeting with Operators on the Design of Replacement Reactors

Overview

At the opinion exchange meeting with CNOs, operators proposed to establish a forum for discussing matters between the regulator and operators. Based on this, at the 36th FY 2024 Nuclear Regulation Authority Meeting (October 9, 2024), it was agreed to establish a Working-level Technical Opinion meeting with operators on the design of replacement reactors. In FY 2024, the Opinion Meeting was held twice.

Members of the Meeting

Secretariat of the NRA	KAMITANI Koji	Director, Regulatory Standard and Research Division
	TERUI Hiroyuki	Deputy Director, Regulatory Standard and Research Division
	SAKAUE Minami	Chief, Regulatory Standard and Research Division
	HOSHI Harutaka	Senior Researcher, Division of Research for Severe Accidents, Regulatory Standard and Research Department
	KATANO Takayuki	Deputy Director, Nuclear Regulation Policy Planning Division
	ISHIHARA Nozomi	Chief, Coordination Section, Nuclear Regulation Policy Planning Division
	OKAMOTO Hajime	Senior Safety Examiner, Division of Licensing for Nuclear Power Plants
	AKIMOTO Yoshihide	Senior Safety Examiner, Division of Licensing for Nuclear Power Plants

(ii) Working-level Exchange of Opinions on the Scope of Application of the Reactor Regulation Act for the JAEA's HTTR Hydrogen Production Facility

Overview

In FY 2024, the working-level meeting was held twice to exchange opinions on the scope of application of the Reactor Regulation Act for the hydrogen production facility, which is planned to be installed as part of the heat utilization test plan to be conducted at the High Temperature Engineering Test Reactor (HTTR) of JAEA's Oarai Research and Development Institute (North Area).

Members of the Meeting

Secretariat of the NRA	KINJYO Shinji	Director-General for Nuclear Regulation, Director-General's Secretariats
	KOYAMADA Takumi	Director for Nuclear Regulation (in charge of reviewing research reactors, use of nuclear materials)
	SHIBUTANI	Planning and Research Officer

	Tomoki	
	ARAKAWA Ichiro	Nuclear Regulation Research Officer