STATUS REPORT ON THE LICENSING ACTIVITIES AND REGULATORY DUTIES OF THE U.S. NUCLEAR REGULATORY COMMISSION

For the Reporting Period of July 1, 2023, through September 30, 2023

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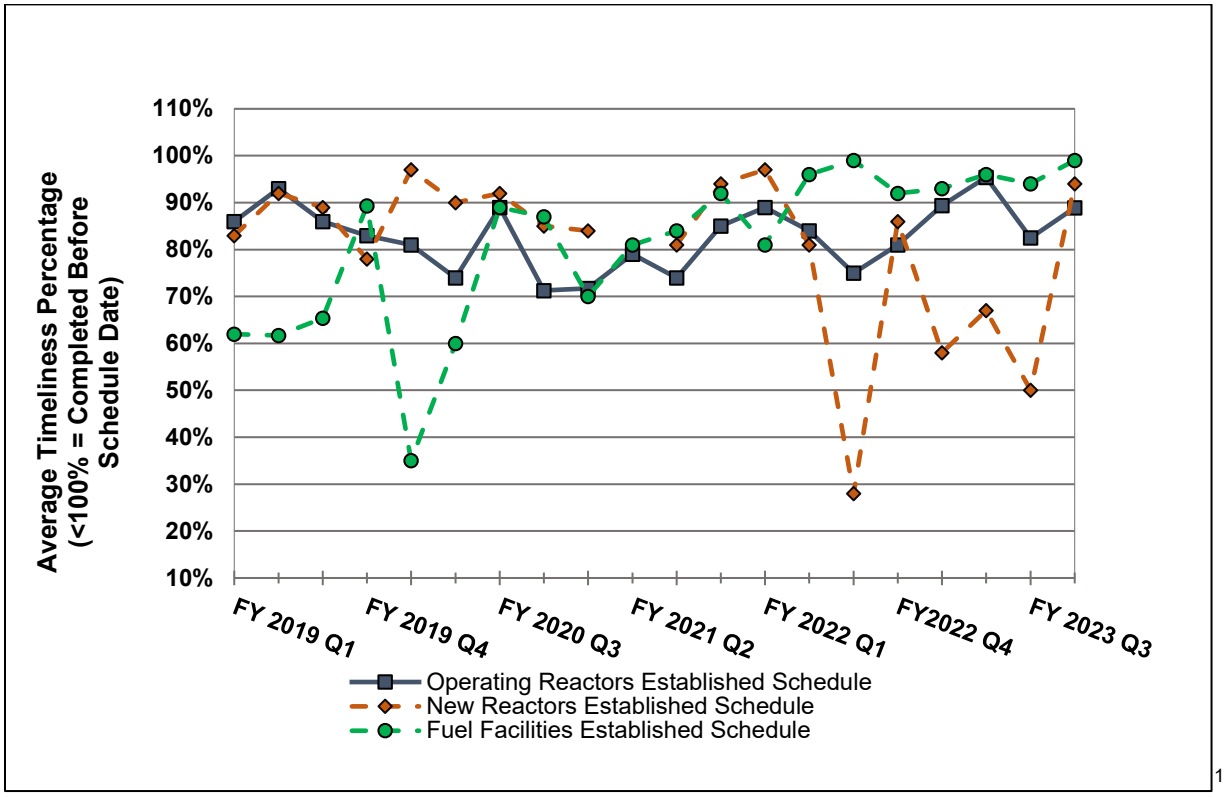
Enclosure 1 – High Level Summary

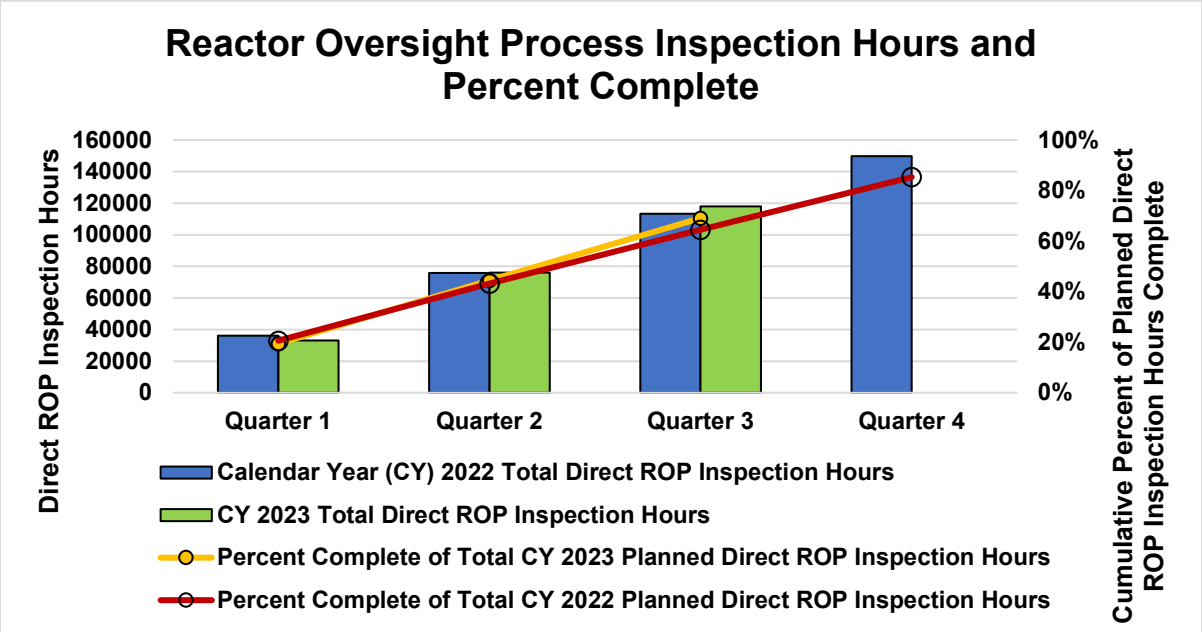
1-1 Average Timeliness Percentage for Licensing Actions Categorized Under the Nuclear Energy Innovation and Modernization Act



[1]

[1] No licensing actions categorized under the Nuclear Energy Innovation and Modernization Act were completed in Quarter (Q) 2 fiscal year (FY) 2021 for the new reactor business line. There was one activity completed in Q3 FY 2022 for the new reactor business line, and it was completed significantly ahead of the established schedule. Because the one activity was completed in 28 percent of the established schedule, this resulted in the Q3 FY 2022 average timeliness percentage for the new reactor business line being 28 percent. There were three activities completed in Q3 FY 2023 for the new reactor business line, and they were completed significantly ahead of the established schedule. Because the three activities were completed in 50 percent of the established schedule, this resulted in the Q3 FY 2023 average timeliness percentage for the new reactor business line being 50 percent.

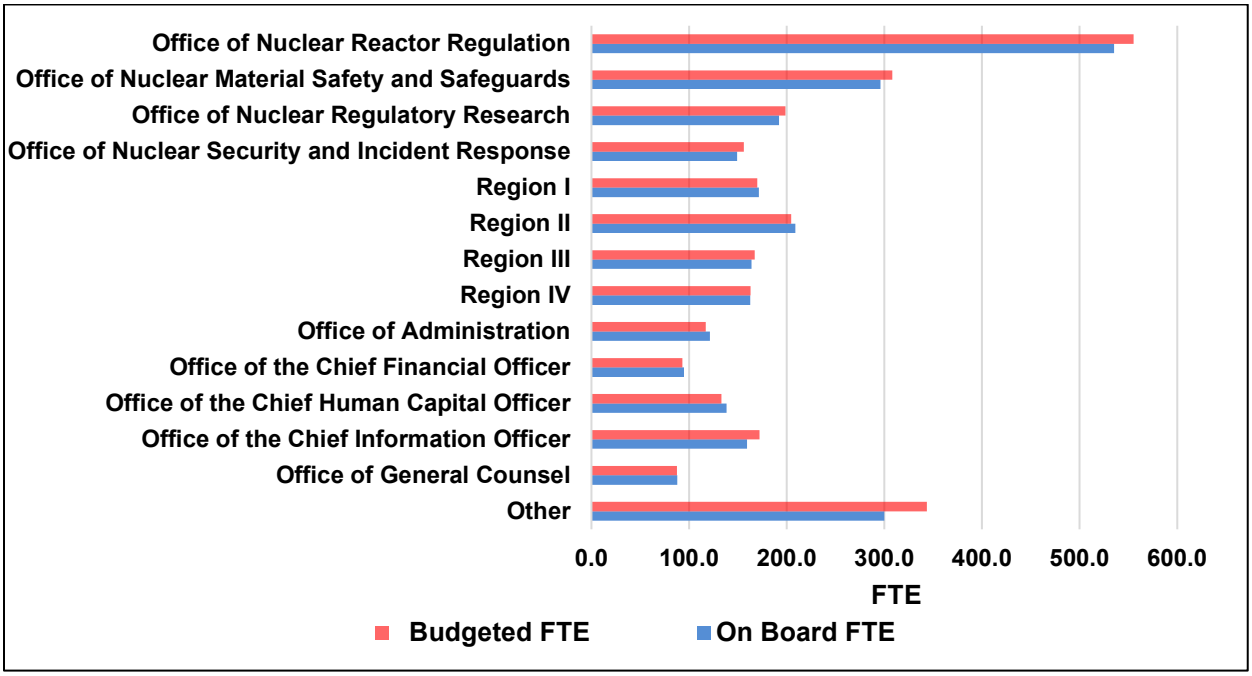
1-2 Reactor Oversight Process (ROP) Inspection Hours and Percent Complete



[2]

[2] "Planned direct ROP inspection hours" refers to the number of hours associated with completion of the U.S. Nuclear Regulatory Commission's (NRC's) "nominal" number of inspection samples established for the baseline inspection program, which is a conservative target. This contrasts with the "minimum" number of hours that would be necessary to complete the set of inspection activities that constitutes completion of the ROP baseline inspection program for the calendar year.

1-3 Full-time Equivalent (FTE) at the End of Q4 FY 2023 vs. Budgeted FTE[3]



1-4 Budget Authority, FTE Utilization, and Fees

NRC FY 2023 Budget Authority September 30, 2023 (Dollars in Thousands)

Fund Sources	FY 2023 Budget[3]	Percent Obligated	Percent Expended
Advanced Reactors	$27,406	78%	46%
Commission Funds	$11,114	78%	78%
Fee-Based Funds	$883,214	96%	77%
General Funds[4]	$1,428	68%	38%
International Activities	$19,024	96%	80%
University Nuclear Leadership Program	$36,409	49%	3%
Official Representation	$48	81%	50%
Total	$978,643	93%	73%
NRC Control Points	FY 2023 Budget	Percent Obligated	Percent Expended
Nuclear Reactor Safety	$499,599	93%	79%
Nuclear Materials and Waste Safety	$113,183	95%	82%
Decommissioning and Low-Level Waste	$26,255	94%	82%
NRC Control Points	FY 2023 Budget	Percent Obligated	Percent Expended

[3] FY 2023 Budget reflects the enactment of the Consolidated Appropriations Act, 2023 and includes the enacted budget and carryover allocated.

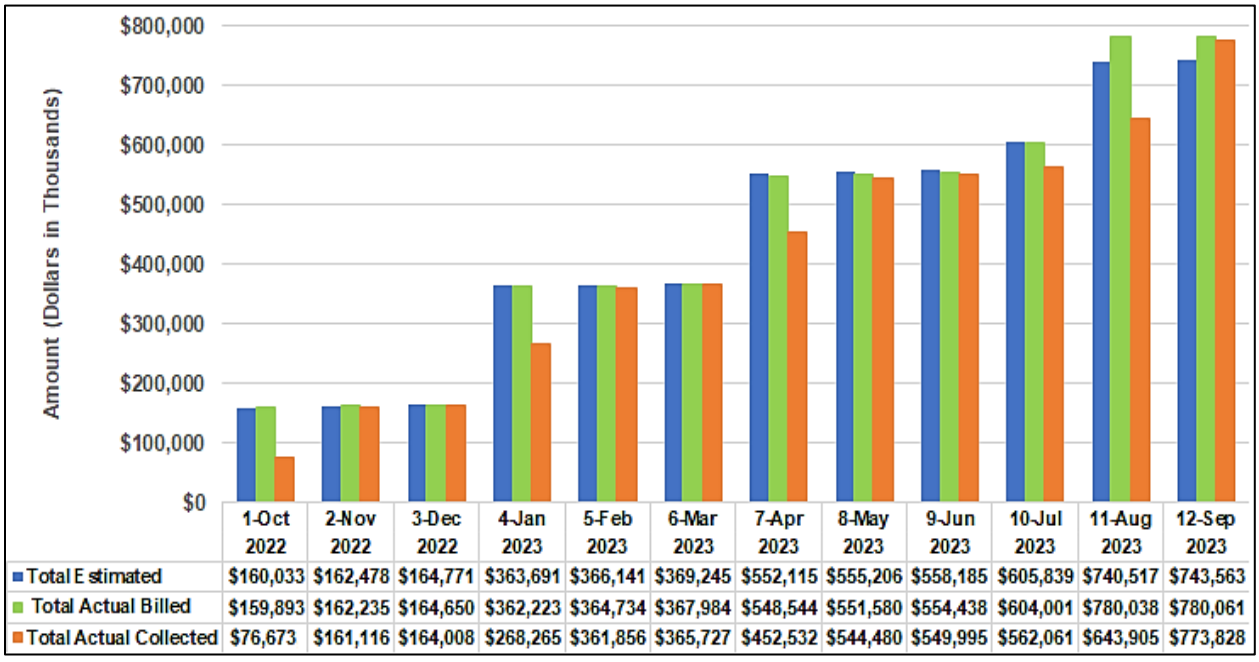
[4] Consistent with previous reports, this row represents waste incidental to reprocessing activities excluded from the fee-recovery requirement.

Corporate Support	$303,197	99%	67%
University Nuclear Leadership Program[5]	$36,409	49%	3%
Total	$978,643	93%	73%

FTE Utilization, Hiring, and Attrition

Total Year-to-Date (YTD) FTE Utilization	Projected End of Year FTE Total Utilization	Q4 Hiring	Q4 Attrition	YTD Hiring	YTD Attrition
2726.7	2726.7	115	49	280	194

FY 2023 Fees Estimated, Fees Billed, and Fees Collected Through Q4



	1-Oct 2022	2-Nov 2022	3-Dec 2022	4-Jan 2023	5-Feb 2023	6-Mar 2023	7-Apr 2023	8-May 2023	9-Jun 2023	10-Jul 2023	11-Aug 2023	12-Sep 2023
Total Estimated	$160,033	$162,478	$164,771	$363,691	$366,141	$369,245	$552,115	$555,206	$558,185	$605,839	$740,517	$743,563
Total Actual Billed	$159,893	$162,235	$164,650	$362,223	$364,734	$367,984	$548,544	$551,580	$554,438	$604,001	$780,038	$780,061
Total Actual Collected	$76,673	$161,116	$164,008	$268,265	$361,856	$365,727	$452,532	$544,480	$549,995	$562,061	$643,905	$773,828

Total for Title 10 of the *Code of Federal Regulations* Part 170, "Fees for Facilities, Materials, Import and Export Licenses, and Other Regulatory Services Under the Atomic Energy Act of 1954, As Amended," Fees Billed (Dollars in Millions)

FY 2021	FY 2022	FY 2023 Q1- Q4
$183.9	$190.7	$186.3

[5] The FY 2023 Explanatory Statement identified this control point as the "Integrated University Program." Division Z of the Consolidated Appropriations Act, 2021 replaced the Integrated University Program with the University Nuclear Leadership Program.

Enclosure 2 – Status of Specific Items of Interest

Enclosure 2 provides the status of specific items of interest including a summary of the item, the activities planned and accomplished under each item within the reporting period, and projected activities under each item for the next two reporting periods.

2-1 Transformation

As a modern, risk-informed regulator, the U.S. Nuclear Regulatory Commission (NRC) has demonstrated an ability to adopt new technologies and ways of implementing its safety and security mission. The NRC continues to make progress in four focus areas: (1) recruiting, developing, and retaining a strong workforce; (2) improving decision-making through the acceptance of an appropriate level of risk without compromising the NRC's mission; (3) establishing a culture that embraces innovation; and (4) adopting new and existing information technology resources. The agency has completed all but one of our initial agencywide initiatives associated with the four focus areas.

The focus areas (i.e., Our People, Be riskSMART, Using Technology, and Innovation) are interwoven into the agency's strategic goals and objectives. To sustain progress and meet the agency's transformation goals, the NRC uses a variety of tools, including "objectives and key results." The NRC continues to leverage available technologies, increase opportunities for staff to gain new skills, attract talented new staff, and foster a culture of safety and innovation that accounts for differing viewpoints and risk insights in our decision-making. Planned future activities will focus on incorporating positive transformational changes into the agency's culture and processes.

Activities Planned and Completed for the Reporting Period (Quarter (Q) 4 Fiscal Year (FY) 2023)

Transformation Activities	Projected Completion Date	Completion Date
Conducted presentations for senior leaders and staff on the results of the "Jam," an agencywide collaborative online discussion, on how to continue to best prepare for the future, focusing on sustaining transformational progress.	09/29/23	09/22/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Transformation Activities	Projected Completion Date
Initiate actions based on the "Jam" analysis, which will help sustain transformational progress and enhance organizational health and performance.	12/29/23
Update public webpage on Transformation related to the results of the "Jam."	12/29/23
Provide agencywide communications on the "Jam" actions and how those actions are helping to enhance organizational health and performance.	01/31/24

2-2 Workforce Development and Management

Each FY, the NRC engages in a five-step Strategic Workforce Planning (SWP) process to improve workforce development to meet its near-term and long-term work demands. The first step in this process is an Agency Environmental Scan that projects the amount and type of work anticipated in the next 5 years and identifies the workforce needs in order to perform that work. By analyzing the current workforce and comparing it to future needs, skill gaps can be identified. In the final step of the process, both short-term and long-term strategies are developed to enable the agency to recruit, retain, and develop a skilled and diverse workforce with the competencies and agility to address both current and emerging needs and workload fluctuations.

To cover anticipated attrition and address skill gaps needed to conduct mission-critical work, the agency continued implementing strategies to recruit and onboard a significant number of new employees during this reporting period, and the agency plans to continue this recruitment effort. Senior leaders are collaborating to develop agencywide priorities to concentrate hiring on those positions with the greatest mission impact. This recruitment effort is positioning the agency to fulfill its important safety and security mission well into the future.

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

Workforce Development and Management Activities	Projected Completion Date	Completion Date
Completed an evaluation of the SWP process for effectiveness and efficiency improvements as identified in the NRC's Annual Evaluation Plan for FY 2023.	09/29/23	09/25/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Workforce Development and Management Activities	Projected Completion Date
Update SWP Guidance and share Final Evaluation Report with all NRC offices.	11/30/23
Conduct recruitment activities and make selections for the Summer 2024 Internship Program.	01/31/24
Conduct recruitment activities and make selections for the 2024 Nuclear Regulator Apprenticeship Network cohort.	01/31/24

2-3 Accident Tolerant Fuel

While the NRC is ready to review and license Accident Tolerant Fuel (ATF), higher burnup, and increased enrichment submittals under the current regulatory framework, the NRC continues to take steps to make agency processes more efficient and effective. The NRC staff is executing the ATF project plan (Agencywide Documents Access and Management System Accession No. ML21243A298), which was revised to include an increased focus on higher burnup and increased enrichment fuels.

During this reporting period, the NRC did not receive any additional ATF fuel vendor topical reports; however, the NRC received an ATF white paper from Framatome, which is currently under review. The white paper discusses a fuel vendor's proposed near-term approach for

addressing regulatory requirements associated with fuel fragmentation, relocation, and dispersal (ML23219A017). In August 2023, the NRC staff completed its review of three topical reports for models and methodology supporting increased enrichment applications (ML23160A042). In September 2023, the NRC staff accepted for review a topical report that discusses fuel evaluation methods and associated methodology for increased enrichment applications (ML23241A015). The NRC staff is on track to complete review of the four ATF fuel vendor topical reports currently under review by the end of FY 2025, in time to support expected licensee submittals to use ATF. No additional operating reactor license amendment requests (LARs) were submitted during this reporting period. During this reporting period, the NRC staff completed the review of two ATF lead test assembly LARs for increased enrichment, higher burnup, coated cladding, and doped pellet technologies (ML23122A302 and ML23093A028).

The NRC expects to receive additional LARs in FY 2024 from licensees of enrichment facilities and fuel fabrication facilities to directly support increased enrichment above 5 weight-percent uranium-235. On July 27, 2023, the NRC received notification from Urenco USA that it plans to submit an LAR at a future date to propose an increase of the enrichment limit in the Louisiana Energy Services license to allow up to 20 weight-percent uranium-235 to support construction of a high-assay low-enriched uranium facility (ML23208A261). On August 22, 2023, the NRC received a notification from Urenco USA indicating that it plans to submit a LAR in October 2023 for the Louisiana Energy Services facility to propose an increase of the enrichment limit to allow up to 10 weight-percent uranium-235 (ML23234A180).

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

ATF Activities	Projected Completion Date	Completion Date
Issued the draft final Regulatory Guide (RG) 1.183, “Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors,” Revision 1 (ML23243B012), to expand applicability to burnup extensions up to 68 gigawatt-days per metric ton uranium and enrichments up to 8 weight-percent uranium-235, in support of the Advisory Committee on Reactor Safeguards (ACRS) full committee meeting.	09/23/23	08/31/23
Held a fourth Higher Burnup Workshop (ML23242A114) to discuss the state of development of higher burnup and increased enrichment technical and regulatory issues, one month ahead of schedule. The workshop also provided a public forum for discussions between the NRC, industry, and other stakeholders.	09/29/23	08/31/23

ATF Activities	Projected Completion Date	Completion Date
Published for public comment draft NUREG-2266, "Environmental Evaluation of Accident Tolerant Fuels with Increased Enrichment and Higher Burnup Levels" (ML23240A756), which generically evaluates the environmental impacts of the uranium fuel cycle, transportation of ATF and waste, and the decommissioning of a light-water reactor utilizing ATF for enrichment levels up to 8 weight-percent uranium-235 and burnup levels up to 80 gigawatt-days per metric ton uranium. Issuance of this NUREG in final form is a critical milestone in the Accident Tolerant Fuel "Roadmap to Readiness" graphic, approved on June 28, 2023, which provides a visual of critical milestones to support preparations for licensing of accident tolerant fuel (ML23158A288).	09/01/23	09/01/23
In accordance with Commission direction in Staff Requirements Memorandum (SRM) to SECY-21-0109 (ML22075A103), published for public comment the regulatory basis for rulemaking, associated with the use of light-water reactor fuel containing uranium enriched to greater than 5 weight-percent uranium-235 (ML23032A504).The regulatory basis provides the technical, legal, and policy information that supports the proposed changes to the NRC's regulations.	09/15/23	09/08/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected ATF Activities	Projected Completion Date
Provide a presentation to the ACRS Fuels, Materials, and Structures Subcommittee on the regulatory basis for rulemaking, associated with the use of light-water reactor fuel containing uranium enriched to greater than 5 weight-percent uranium-235, published for public comment (ML23032A504).	10/18/23
Hold a public meeting to discuss the regulatory basis for rulemaking, associated with the use of light-water reactor fuel containing uranium enriched to greater than 5 weight-percent uranium-235, published for public comment (ML23032A504).	10/25/23
Participate in the 2024 NRC Regulatory Information Conference (RIC) to provide stakeholders an opportunity to learn about the progress of ATF licensing activities and technologies to date and the activities that support efficient licensing of ATF concepts. Through participation at the RIC, the NRC staff will communicate about ATF readiness activities, planned stakeholder engagements, the NRC's projected licensing timelines, and any challenges to ATF deployment timelines.	03/14/24

Projected ATF Activities	Projected Completion Date
Issuance of a report documenting a phenomena identification and ranking table exercise related to higher burnup fuel fragmentation, relocation, and dispersal and its potential consequences. The report will be used by the NRC to support changes to the regulatory infrastructure for higher burnup fuel.	03/31/24

2-4 Digital Instrumentation and Control

The NRC staff has transitioned to using its improved infrastructure to support the review of licensees' digital instrumentation and control (I&C) modernization LARs and continues to complete digital I&C infrastructure improvements to address protection against common cause failure (CCF) and consider endorsement of updated consensus standards. These activities support the NRC's vision to establish a more modern, risk-informed regulatory structure with reduced uncertainty that will enable the expanded safe use of digital technologies.

Two licensees have submitted LARs for planned digital upgrades:

- On July 30, 2022 (ML22213A045), Florida Power & Light Company (FPL) submitted LARs for Turkey Point Nuclear Plant, Units 3 and 4 (Turkey Point). The LARs, if approved, would permit the use of digital I&C for the reactor protection system, engineered safety features actuation system, and nuclear instrumentation system at Turkey Point. On June 28, 2023, FPL asked the NRC staff to temporarily suspend the review of the Turkey Point LARs (ML23179A141) for an unspecified period of time. Due to unforeseen material supply issues, FPL plans to revise the LARs and resubmit them to the NRC. On July 20, 2023, the NRC suspended the review of the Turkey Point LARs, at the request of FPL (ML23188A124).

- On September 26, 2022, Constellation Energy Generation, LLC submitted LARs for Limerick Generating Station, Units 1 and 2 (Limerick) to revise the licensing and design basis to incorporate proposed digital modifications. The LARs also request other changes to plant functions and the reactivity control system. On May 23, 2023, Constellation informed the NRC staff that it is delaying submittal of information needed to complete the Limerick LARs by seven months and has changed the planned installation of the digital modification from Unit 1 in Calendar Year (CY) 2024 to Unit 2 in CY 2025 (ML23143A342). The changes by Constellation are due to design refinement iterations with the digital system original equipment manufacturer. As a result of the changes by Constellation, the NRC staff revised its review schedule, including the planned completion date for the review (ML23187A096).

The NRC staff provided SECY-22-0076 (ML22164B003) to the Commission for its consideration on August 10, 2022, recommending expansion of the current policy on digital I&C CCF, which is contained in the SRM to SECY-93-087 (ML003708056). On January 23, 2023, the NRC staff provided a supplement to SECY-22-0076 (ML22357A037) to the Commission as a result of stakeholder views received; the supplement included additional discussion on the need for independent and diverse displays and manual controls in the main control room in the event of a CCF. The Commission approved the NRC staff's recommendation subject to revisions in SRM-SECY-22-0076 on May 25, 2023 (ML23145A176). In accordance with the Commission's direction in SRM-SECY-22-0076, the NRC staff will be issuing final implementing guidance by May 25, 2024, through the revision of Branch Technical Position (BTP) 7-19 to add guidance for

the review of risk-informed approaches. The NRC staff also plans to revise guidance for non-light-water reactors (non-LWRs), including the Design Review Guide (ML21011A140), after obtaining additional stakeholder perspectives on the implementation of the revised policy through pre-application engagement and ongoing advanced reactor I&C workshops.

The NRC staff also finalized an RG endorsing, with some exceptions and clarifications, Institute of Electrical and Electronics Engineers Standard 7-4.3.2-2016, "Criteria for Programmable Digital Devices in Safety Systems of Nuclear Power Generating Stations." The NRC completed work on Draft Regulatory Guide DG-1374 and issued final Revision 4 to RG 1.152, "Criteria for Programmable Digital Devices in Safety-Related Systems of Nuclear Power Plants," on July 25, 2023 (ML23054A463). This revision to RG 1.152 will support the modernization and improvement of the digital I&C regulatory infrastructure.

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

Digital I&C Activities	Projected Completion Date	Completion Date
Published Revision 4 to RG 1.152. In Revision 4, the title of RG 1.152 was changed from "Criteria for Use of Computers in Safety Systems of Nuclear Power Plants" to "Criteria for Programmable Digital Devices in Safety-Related Systems of Nuclear Power Plants" (ML23054A463).	07/28/23	07/25/23
Briefed the ACRS on draft revision to BTP 7-19, "Guidance for Evaluation of Defense in Depth and Diversity to Address Common-cause Failure Due to Latent Design Defects in Digital Safety Systems."	09/07/23[6]	09/07/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Digital I&C Activities	Projected Completion Date
Revision to BTP 7-19	
• Issue draft revision to BTP 7-19 for public comment.	10/27/23
• Brief the ACRS on revision to BTP 7-19.	03/31/24

2-5 Vogtle Electric Generating Plant Units 3 and 4

The NRC issued two combined licenses (COLs) to Southern Nuclear Operating Company (SNC) and its financial partners on February 10, 2012, for two AP1000 units (Units 3 and 4) to be built and operated at the Vogtle site near Augusta, GA. Construction of these units is complete. Therefore, as of this reporting period, all inspections, tests, analyses, and acceptance criteria (ITAAC) inspections and ITAAC closure notifications have been completed for both units and will no longer be included in this section.

[6] This meeting was not identified as a projected activity in the previous report because plans for the meeting had not yet been made.

On July 31, 2023, SNC declared the start of commercial operations. Inspection activities for Vogtle Unit 3 are conducted under the Reactor Oversight Process (ROP).

On July 28, 2023, the NRC issued the finding that all acceptance criteria are met under Title 10 of the *Code of Federal Regulations* (10 CFR) 52.103(g) for Vogtle Unit 4 (ML22348A093). This finding allowed SNC to operate Vogtle Unit 4 in accordance with the terms and conditions of the COL. The NRC describes the basis for this finding in the 10 CFR 52.103(g) basis document for Vogtle Unit 4 (ML22348A088). Upon the issuance of this finding, the NRC's oversight of Vogtle Unit 4 transitioned from the Construction Reactor Oversight Process to the ROP and is in the Licensee Response Column of the ROP's Action Matrix. SNC projects the start of commercial operations for Vogtle Unit 4 between Q4 CY 2023 and Q1 CY 2024.

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

Vogtle Electric Generating Plant Units 3 and 4 Activities	Projected Completion Date	Completion Date
Granted an LAR to revise the timing of Vogtle Unit 4 Technical Specifications effectiveness prior to initial criticality (ML23158A205).	07/19/23	07/19/23
Issued a letter regarding Vogtle Unit 4's transition to the operating reactor assessment program (ML23199A147).	08/31/23	07/19/23
Issued the finding that all acceptance criteria contained in the license are met in accordance with 10 CFR 52.103(g) (ML22348A093). After this finding, the licensee may operate the facility in accordance with the license.	08/31/23	07/28/23
Granted an LAR that removes Appendix C (ITAAC) from the Vogtle Unit 3 COL (ML23158A243).	08/15/23[7]	07/31/23
Conducted a pre-submittal meeting on a proposed request for exemptions from Tier 1 and Tier 2* requirements for Vogtle Units 3 and 4 (ML23241A919).	08/31/23	09/20/23
Conducted a pre-submittal meeting on a draft LAR to revise Technical Specification 3.7.6 for Vogtle Units 3 and 4 (ML23216A086).	09/30/23	09/28/23

[7] This LAR was not identified as a projected activity in the previous report because the LAR was originally scheduled for completion in Q2 FY 2024; however, the NRC staff and SNC agreed to revise the projected completion date to August 15, 2023.

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Vogtle Electric Generating Plant Units 3 and 4 Activities	Projected Completion Date
Complete the review of an LAR to adopt WCAP-17661-P-A as part of the overall Southern Nuclear fleet-wide revision to Technical Specifications.	10/31/23[8]
Complete the safety evaluation (SE) for the Vogtle Units 3 and 4 Full Compliance of Required Action for NRC Order EA-12-049 Mitigation Strategies for Beyond-Design-Basis External Events.	11/30/23
Complete the review of an LAR for an exception to RG 1.163.	12/28/23
Issue a lessons-learned summary report on Part 52 construction oversight for Vogtle Units 3 and 4 and V.C. Summer Units 2 and 3.	12/30/23
Complete the review of an LAR related to Technical Specifications 3.8.3, Inverters – Operating.	01/25/24

A COL allows a licensee to construct a plant and to operate it once construction is complete if the NRC determines that certain standards identified in the COL are met. These standards are called ITAAC. After this NRC finding, the licensee may operate the facility in accordance with the license. The majority of ITAAC are from the design certification for the particular reactor technology that a plant uses. Throughout the construction process, NRC inspectors will perform inspections based on Inspection Manual Chapter 2503, "Construction Inspection Program: Inspections of Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) Related Work," and the NRC's Construction Inspection Program at the plant site to confirm that the licensee has successfully completed the ITAAC.

Additional information on the ITAAC process as well as closure for Vogtle Units 3 and 4 is available at https://www.nrc.gov/reactors/new-reactors/how-we-regulate/oversight/itaac.html.

Vogtle Unit 4 Summary of ITAAC Inspections Completed (Q4 FY 2023)

Unit	Number of ITAAC Remaining Requiring Inspection	Total Inspections Completed[9]	ITAAC Inspected[10]	ITAAC Inspections Closed[11]
Vogtle 4	0	67	44	44

[8] The projected completion date for this activity was modified from October 14, 2023, to October 31, 2023, to address additional responses to requests for additional information as part of the safety review.

[9] This column includes all inspections related to Vogtle Unit 4 completed during the reporting period; the column is not limited to ITAAC (e.g., quality assurance inspections).

[10] "ITAAC Inspected" refers to the number of ITAAC that were inspected as part of ongoing inspections and does not indicate that all inspections were completed for those ITAAC. Only "targeted ITAAC" – ITAAC selected for inspection by the NRC staff – are included in this count.

[11] "ITAAC Inspection Closed" refers to the number of ITAAC for which all associated inspections have been completed during the reporting period.

ITAAC Reviews Completed for the Reporting Period (Q4 FY 2023)[12]

The table below provides ITAAC closure notification reviews completed during the reporting period for Vogtle Unit 4, including the date when the NRC received the ITAAC closure notice and the date when the review was completed.

Unit	ITAAC No.	Received Date	Approval Date
Vogtle 4	2.2.04.05a.i	06/29/23	07/03/23
Vogtle 4	2.2.02.10c	06/30/23	07/03/23
Vogtle 4	2.1.02.11c.ii	06/30/23	07/03/23
Vogtle 4	2.2.03.11c.ii	06/30/23	07/03/23
Vogtle 4	E.3.9.06.00.04	06/28/23	07/05/23
Vogtle 4	2.1.02.13c	07/04/23	07/06/23
Vogtle 4	2.3.09.04b	07/04/23	07/06/23
Vogtle 4	2.3.11.03c	07/04/23	07/06/23
Vogtle 4	3.3.00.07d.ii.a	07/01/23	07/07/23
Vogtle 4	2.1.02.11c.i	07/06/23	07/07/23
Vogtle 4	2.2.01.10c	07/06/23	07/07/23
Vogtle 4	2.1.02.09a	06/30/23	07/10/23
Vogtle 4	2.2.03.11c.i	07/06/23	07/10/23
Vogtle 4	2.3.11.03b	07/08/23	07/10/23
Vogtle 4	2.3.29.04	07/08/23	07/10/23
Vogtle 4	2.3.10.07a.ii	07/08/23	07/10/23
Vogtle 4	3.3.00.10.i	06/13/23	07/11/23
Vogtle 4	2.6.09.15a	06/28/23	07/11/23
Vogtle 4	2.6.09.05a	06/28/23	07/11/23
Vogtle 4	2.5.02.06c.i	07/01/23	07/11/23
Vogtle 4	2.2.01.05.i	07/06/23	07/11/23
Vogtle 4	C.2.6.09.05a	06/15/23	07/12/23
Vogtle 4	2.2.03.10	06/16/23	07/12/23
Vogtle 4	2.6.09.08	06/19/23	07/12/23
Vogtle 4	C.2.6.09.03b	06/29/23	07/12/23
Vogtle 4	3.3.00.17	06/30/23	07/12/23
Vogtle 4	3.3.00.16	07/01/23	07/12/23
Vogtle 4	2.5.01.02a	07/07/23	07/12/23
Vogtle 4	2.6.03.02.i	07/08/23	07/12/23
Vogtle 4	3.3.00.05c	07/08/23	07/12/23
Vogtle 4	2.6.03.04a	07/12/23	07/12/23
Vogtle 4	2.2.04.02a	07/12/23	07/13/23
Vogtle 4	2.7.02.03a	07/12/23	07/13/23

[12] This table accounts for the total number of ITAAC that SNC provided closure notifications for, and that the NRC verified. This includes both ITAAC that were selected for inspection by the NRC staff (targeted ITAAC) and ITAAC that were not selected for inspection by the NRC staff (non-targeted ITAAC). This differs from the previous table, where the “ITAAC Inspected” column is the number of targeted ITAAC that were inspected during the designated reporting period.

Unit	ITAAC No.	Received Date	Approval Date
Vogtle 4	2.7.06.03.i	07/12/23	07/13/23
Vogtle 4	2.6.02.02c	07/13/23	07/13/23
Vogtle 4	2.6.04.02a	07/13/23	07/13/23
Vogtle 4	2.3.04.04.ii	06/02/23	07/14/23
Vogtle 4	2.1.03.06.i	07/13/23	07/14/23
Vogtle 4	3.3.00.07c.ii.b	04/13/23	07/16/23
Vogtle 4	2.3.04.10	06/16/23	07/16/23
Vogtle 4	2.2.01.11a.iv	07/11/23	07/17/23
Vogtle 4	2.6.09.05c	07/13/23	07/17/23
Vogtle 4	2.6.09.13a	07/13/23	07/17/23
Vogtle 4	2.2.05.07c	07/14/23	07/17/23
Vogtle 4	C.2.6.09.07	07/14/23	07/17/23
Vogtle 4	C.2.6.09.08a	07/14/23	07/17/23
Vogtle 4	2.2.04.12a.iii	07/15/23	07/17/23
Vogtle 4	2.4.02.02a	07/15/23	07/17/23
Vogtle 4	2.4.02.02b	07/15/23	07/17/23
Vogtle 4	2.5.04.02.i	07/15/23	07/17/23
Vogtle 4	2.6.05.02.ii	07/15/23	07/17/23
Vogtle 4	2.7.01.14	07/15/23	07/17/23
Vogtle 4	2.7.05.02.i	07/15/23	07/17/23
Vogtle 4	3.5.00.06	07/15/23	07/17/23
Vogtle 4	2.1.03.07.i	07/14/23	07/18/23
Vogtle 4	2.3.06.02a	07/15/23	07/18/23
Vogtle 4	2.1.02.05a.i	07/15/23	07/18/23
Vogtle 4	2.1.01.04	07/18/23	07/18/23
Vogtle 4	2.5.02.06a.ii	07/14/23	07/19/23
Vogtle 4	2.2.03.02a	07/17/23	07/19/23
Vogtle 4	2.2.05.07a.i	07/18/23	07/19/23
Vogtle 4	2.6.01.04e	07/18/23	07/19/23
Vogtle 4	2.6.04.02c	07/18/23	07/19/23
Vogtle 4	2.6.01.04d	07/19/23	07/19/23
Vogtle 4	2.6.03.04c	07/17/23	07/20/23
Vogtle 4	2.2.03.05a.i	07/19/23	07/20/23
Vogtle 4	3.3.00.08	07/20/23	07/20/23
Vogtle 4	2.1.02.02a	07/20/23	07/21/23
Vogtle 4	2.1.03.03	07/20/23	07/21/23
Vogtle 4	3.3.00.07c.ii.a	07/20/23	07/21/23

Vogtle Units 3 and 4 LAR Reviews Completed (Q4 FY 2023)

Number of LAR Reviews Forecast to be Completed in the Reporting Period	Number of LAR Reviews that Were Completed in the Reporting Period
1	2[13]

2-6 Advanced Nuclear Reactor Technologies

The NRC continues to make significant progress in enhancing its efforts to review non-LWR designs, consistent with the NRC staff's vision and strategy (ML16356A670) and implementation action plans to achieve non-LWR safety review readiness.[14] During this reporting period, the NRC staff continued its extensive stakeholder engagement, including holding several public meetings and workshops regarding various advanced reactor topics, such as guidance for advanced reactor content of applications.

On March 1, 2023, the NRC staff provided SECY-23-0021, "Proposed Rule: Risk-Informed, Technology-Inclusive Regulatory Framework for Advanced Reactors (RIN 3150-AK31)" (ML21162A093), to the Commission for its consideration. Once the SRM is issued, the staff will revise the draft proposed rule to reflect Commission direction and then issue the resulting proposed rule for public comment. After the NRC staff receives, considers, and addresses the public comments, the draft final rule package, including key guidance, will be submitted to the Commission for consideration. The NRC's rulemaking to establish a risk-informed, performance-based, and technology-inclusive regulatory framework for commercial nuclear plants is on target to be completed in advance of the Nuclear Energy Innovation and Modernization Act (NEIMA) required deadline of December 31, 2027. Further details about the rulemaking schedule can be found on the NRC's public website (https://www.nrc.gov/reactors/new-reactors/advanced/rulemaking-and-guidance/part-53.html).

A significant recent accomplishment was the NRC staff's release of a draft white paper on "Micro-Reactor Licensing and Deployment Considerations: Fuel Loading and Operational Testing at a Factory" (ML23236A575) to support stakeholder engagement on options for regulating the fuel loading and operational testing of commercial factory-fabricated micro-reactors. This draft white paper was discussed during a public meeting on September 11, 2023, where there was significant stakeholder interest. On September 27, 2023, the NRC staff released an updated version of this draft white paper (ML23264A802 and ML23264A803) to support engagement with the ACRS; the updated draft white paper was discussed at a full committee meeting of the ACRS on October 3, 2023. The stakeholder engagement on this draft white paper will inform the NRC staff's efforts to develop a paper for the Commission on technical, licensing, and potential policy issues for commercial factory-fabricated micro-reactors.

The NRC staff has also continued its efforts to develop guidance for non-LWR licensing related to the Technology-Inclusive Content of Applications Project (TICAP) and Advanced Reactors Content of Applications Project (ARCAP). During the prior reporting period, the NRC staff published, for public comment, a draft RG (DG-1404), "Guidance for a Technology-Inclusive Content-of-Application Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors," for potential

[13] One LAR was planned for completion in Q2 FY 2024, but the NRC staff and SNC agreed to revise the projected completion date to August 15, 2023, and the NRC granted the LAR on July 31, 2023.

[14] The NRC's public website lists the implementation action plans and is updated periodically to show the status of these activities (https://www.nrc.gov/reactors/new-reactors/advanced/details.html#visStrat).

endorsement of industry-led Nuclear Energy Institute (NEI) 21-07, “Technology Inclusive Guidance for Non-Light Water Reactors Safety Analysis Report Content for Applicants Using the NEI 18-04 Methodology.” The NRC staff is addressing the comments received and plans to publish the final guidance in 2024 as RG 1.253, “Guidance for a Technology-Inclusive Content-of-Application Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors.” The NRC staff is also addressing the comments received on nine NRC-led ARCAP draft interim staff guidance documents and plans to issue the final versions of these documents in 2024.

The NRC holds periodic public stakeholder meetings to discuss advanced reactor topics of interest. A list of the meetings that the NRC has conducted to date can be found on the NRC’s public website (https://www.nrc.gov/reactors/new-reactors/advanced/stakeholder-engagement). The NRC is also actively engaged with stakeholders regarding the ARCAP. A list of these meetings and related draft guidance documents to support the meetings can be found on the NRC’s public website (https://www.nrc.gov/reactors/new-reactors/advanced/rulemaking-and-guidance/advanced-reactor-content-of-application-project.html).

On April 13, 2023, the Commission directed the staff to license and regulate near-term fusion energy systems under a byproduct material framework (ML23103A449) and approved a limited-scope rulemaking. The Commission also directed the staff to develop a new volume of NUREG-1556, “Consolidated Guidance About Materials Licenses,” dedicated to fusion energy systems to provide consistent guidance across the National Materials Program. Finally, the Commission directed the staff to take into account the existence of fusion systems that already have been licensed and are being regulated by the Agreement States, as well as those that may be licensed prior to the completion of the rulemaking. The NRC staff has initiated the development of the draft proposed rule language and draft guidance. The NRC staff held a public meeting on July 12, 2023, that discussed the development of the draft proposed rule and guidance under NUREG-1556 and plans for future meetings to continue to engage stakeholders during the rulemaking and guidance development process. The NRC staff held an additional public meeting on October 11 at which it discussed draft preliminary proposed rule language and the staff’s overall approach. Additional public meetings are scheduled for November 1 and 9, 2023, to discuss specific topics in more detail and the draft guidance. The draft proposed rule and draft guidance for fusion energy systems are scheduled to be provided to the Commission for its consideration in the fall of 2024.

Additionally, the NRC staff is preparing, through early interactions with reactor designers, to review specific advanced reactor designs. These pre-application interactions provide predictability in the licensing process through early identification and, where appropriate, resolution of technical and policy issues that could affect licensing. Information on the reactor designers that have formally notified the NRC of their intent to engage in regulatory interactions can be found on the NRC’s public website (https://www.nrc.gov/reactors/new-reactors/advanced/ongoing-licensing-activities/pre-application-activities.html).

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

Advanced Nuclear Reactor Technologies Activities	Projected Completion Date	Completion Date
Issue final SE to General Atomics-Electromagnetic Systems for its topical report on principal design criteria (ML23174A176).	07/06/23	07/06/23

Advanced Nuclear Reactor Technologies Activities	Projected Completion Date	Completion Date
Entered into a Memorandum of Understanding with the Department of Energy (DOE) on Roles and Responsibilities for National Environmental Policy Act (NEPA) Implementation Requirements for Reactor Demonstration Projects Supported by DOE (ML23213A147).	09/30/23	07/29/23
Released draft white paper titled "Micro-Reactor Licensing and Deployment Considerations: Fuel Loading and Operational Testing at a Factory" to support stakeholder engagement (ML23236A575).[15]	08/31/23	08/29/23
Held a public workshop as part of the SCALE/MELCOR non-LWR fuel cycle demonstration project for a sodium cooled fast reactor (ML23202A091).	09/30/23	09/20/23
Issue final SE to TerraPower for its topical report on Nuclear Island/Energy Island interface (ML23257A260).	10/12/23	09/28/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Advanced Nuclear Reactor Technologies Activities	Projected Completion Date
Publish DG-4034 (proposed revision 4 to RG 4.7), "General Site Suitability Criteria for Nuclear Power Stations," for public comment.	10/31/23[16]
Submit a paper to the Commission on "Micro-Reactor Licensing and Deployment Considerations: Fuel Loading and Operational Testing at a Factory."[17]	10/31/23
Issue final guidance, DANU-ISG-2023-01, "Material Compatibility."	10/31/23
Issue final SE to University of Illinois at Urbana-Champaign for its topical report on regulatory applicability analysis.	12/31/23
Publish DG-1410 (proposed new RG 1.251), "Technology-Inclusive, Risk-Informed, and Performance-Based Methodology for Seismic Design of Commercial Nuclear Plants," for public comment.	12/31/23
Publish DG-1307 (proposed new RG 1.252), "Seismically Isolated Nuclear Power Plants," for public comment.	12/31/23

[15] In the previous report, this activity was described as "Release a draft white paper on 'Technical, Licensing, and Potential Policy Issues for Factory-Fabricated Transportable Micro-Reactors' to support stakeholder engagement."
[16] The projected completion date for this activity was extended from September 29, 2023, to October 31, 2023, to allow additional time for resolution of internal comments.
[17] In the previous report, this activity was described as "Submit a paper to the Commission on 'Technical, Licensing, and Potential Policy Issues for Factory-Fabricated Transportable Micro-Reactors.'"

Projected Advanced Nuclear Reactor Technologies Activities	Projected Completion Date
Publish the final rule on "Emergency Preparedness Requirements for Small Modular Reactors and Other New Technologies."	02/29/24
Issue final RG 1.242, "Performance-Based Emergency Preparedness for Small Modular Reactors, Non-Light-Water Reactors, and Non-Power Production or Utilization Facilities."	02/29/24
Issue final SE to X-energy for its topical report on principal design criteria.	03/29/24[18]
Issue final DANU-ISG-2022-01, "ARCAP Roadmap Interim Staff Guidance."	03/29/24
Issue final DANU-ISG-2022-02, "ARCAP Chapter 2 Site Information."	03/29/24
Issue final DANU-ISG-2022-03, "ARCAP Chapter 9 Normal Effluents."	03/29/24
Issue final DANU-ISG-2022-04, "ARCAP Chapter 10 Occupational Dose."	03/29/24
Issue final DANU-ISG-2022-05, "ARCAP Chapter 11 Organization and Human-System Consideration."	03/29/24
Issue final DANU-ISG-2022-06, "ARCAP Chapter 12 Post-construction Inspection, Testing, and Analysis Program."	03/29/24
Issue final DANU-ISG-2022-07, "ARCAP Risk-informed Inservice Inspection and Inservice Testing."	03/29/24
Issue final DANU-ISG-2022-08, "ARCAP Risk-informed Technical Specifications."	03/29/24
Issue final DANU-ISG-2022-09, "ARCAP Fire Protection for Operations."	03/29/24
Issue final RG 1.253, "Guidance for a Technology-Inclusive Content-of-Application Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors."	03/29/24

2-7 Advanced Reactor Licensing Reviews

Kairos Construction Permit Application Reviews for Hermes 1 and Hermes 2

Kairos Power LLC (Kairos) submitted an application for a construction permit for the Kairos Power Fluoride Salt-Cooled, High-Temperature Non-Power Reactor (Hermes 1). Kairos submitted application documents to the NRC by letters dated September 29, 2021 (submitting the Preliminary Safety Analysis Report) (ML21272A375), and October 31, 2021 (submitting the Environmental Report) (ML21306A131).

The NRC staff performed an acceptance review of the Hermes 1 construction permit application and docketed the application on November 29, 2021 (ML21319A354). The NRC staff completed its detailed technical review of the safety of the Hermes 1 design and issued the final SE on

[18] The projected completion date for this activity was extended from March 13, 2024, to March 29, 2024, because the applicant submitted an updated revision of the topical report, which included a significant amount of new information for the NRC staff to review.

June 13, 2023 (ML23158A265). The NRC staff issued the final environmental impact statement for the application on August 17, 2023 (ML23214A269). A mandatory hearing on the application is scheduled for October 19, 2023 (88 FR 60724). Application documents and information on the review are available on the NRC's public website (https://www.nrc.gov/reactors/non-power/hermes-kairos.html).

On July 14, 2023, Kairos submitted a second construction permit application for a two-unit test reactor facility (Hermes 2) that would be located on the same site as the proposed Hermes 1 test reactor (ML23195A121). The Hermes 2 test reactors would use the same fluoride salt-cooled, high-temperature reactor technology as the Hermes 1 reactor but would incorporate some additional features such as intermediate salt loops and a shared turbine generator system. The NRC staff accepted the Hermes 2 construction permit application for review on September 11, 2023 (ML23233A167).

Abilene Christian University Molten Salt Research Reactor Construction Permit Application Review

On August 12, 2022, Abilene Christian University (ACU) submitted an application for a construction permit for a molten salt research reactor (MSRR) (less than 1 megawatt thermal power) to be located on the ACU campus in Abilene, TX (ML22227A201). On October 20, 2022, ACU supplemented its application to provide additional instrumentation and control design information (ML22293B817).

The NRC staff performed an acceptance review of the MSRR construction permit application and docketed the application on November 18, 2022 (ML22313A097). The NRC staff is currently conducting a detailed technical review of the safety of the MSRR design, which will lead to a SE. The NRC staff plans to prepare an environmental assessment for this application. The NRC staff anticipated issuing the final SE by May 2024 and the environmental assessment by April 2024 (ML22341A615). On September 14, 2023, the NRC staff notified ACU of the potential for an update to the review schedule; the staff informed ACU that it remains engaged with ACU to resolve technical issues associated with the review and that additional time is needed for ACU to provide the information necessary for the staff to complete its review of the application (ML23249A095). The NRC staff will re-evaluate the review schedule when the timeline for the resolution of the remaining technical topics and the corresponding preliminary safety analysis report changes becomes clear. Application documents and information on the review are available on the NRC's public website (https://www.nrc.gov/reactors/non-power/new-facility-licensing/msrr-acu.html).

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

Advanced Reactor Licensing Review Activities	Projected Completion Date	Completion Date
Issue final Kairos Hermes 1 Environmental Impact Statement (ML23214A269).	09/15/23	08/17/23
Complete acceptance review for Kairos Hermes 2 construction permit application[19]	09/12/23	09/11/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Advanced Reactor Licensing Review Activities	Projected Completion Date
Complete regulatory audits and evaluate any additional docketed information necessary for the preparation of the ACU SE.	08/30/23[20]
Complete draft ACU environmental assessment.	10/31/23
Complete draft SE for Kairos Hermes 2.	03/11/24
Complete draft environmental assessment for Hermes 2.	03/29/24

2-8 Reactor Oversight Process

The ROP is a risk-informed, performance-based oversight program that contains provisions for continuous self-assessment and improvement.

During the second quarter of FY 2023, the Commission issued several SRMs approving the staff's recommended options related to the greater-than-green inspection findings and performance indicators (SECY-22-0086, ML23069A093), Problem Identification and Resolution inspection frequency (SECY-22-0087, ML23062A686), and Emergency Preparedness Significance Determination Process (SECY-22-0089, ML23040A378), and providing additional direction for the staff. During this reporting period, the Commission issued SRM-SECY-23-0010, ML23244A282, approving the staff's recommended option to retire the alert and notification system performance indicator and approving the implementation of an emergency response facility and equipment readiness performance indicator to measure licensee emergency preparedness.

In accordance with the Commission's direction, the staff revised Inspection Manual Chapter 0305, "Operating Reactor Assessment Program," dated May 4, 2023 (ML23093A184), and Inspection Procedure (IP) 71111.24, "Testing and Maintenance of Equipment Important to Risk," dated March 7, 2023 (ML23062A724). The NRC staff is in the process of revising Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process" (ML15128A462), dated September 22, 2015, in accordance with the Commission's direction. The staff is also in the process of revising IP 71152, "Problem Identification and Resolution," consistent with the Commission's direction.
The NRC staff continues to assess the ROP as part of its normal work practices through the NRC's Be RiskSMART framework, stakeholder correspondence, feedback from ROP public meetings, and the ROP self-assessment program. If potential changes are identified, the staff

[19] This activity was not identified as a projected activity in the previous report because the Kairos Hermes 2 construction permit application was submitted during the current reporting period (on July 14, 2023).

[20] On September 14, 2023, the NRC staff notified ACU that it was unable to complete the regulatory audits by August 30, 2023, because additional time is needed for ACU to provide necessary information to the staff and for the staff and ACU to bring the remaining technical topics to resolution. The NRC staff will re-evaluate the schedule once the timeline for the resolution of the remaining technical topics and the corresponding preliminary safety analysis report changes becomes clear.

will seek Commission approval of changes to the ROP, or provide the Commission with notification of changes, in accordance with Management Directive/Directive Handbook 8.13, "Reactor Oversight Process" (ML17347B670).

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

ROP Activities	Projected Completion Date	Completion Date
Began first implementation of IP 71111.21N.04, "Age-Related Degradation," focused engineering inspections at a reactor site (McGuire Nuclear Station).	08/31/23	08/28/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected ROP Activities	Projected Completion Date
Complete ROP Implementation Audit of Region II.	12/31/23
Assess the baseline security significance determination process for power reactors (ML22178A222) as part of the ROP program area evaluations under the ROP self-assessment program.	05/31/24[21]

2-9 Backfit

The NRC's backfitting rules are codified in 10 CFR Sections 50.109, "Backfitting," 70.76, "Backfitting," 72.62, "Backfitting," and 76.76, "Backfitting." The backfitting rules define backfitting "as the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position…."[22] The rules require, in the absence of an applicable exception, an analysis showing that the backfit would result in a substantial increase in the overall protection of the public health and safety or the common defense and security and that the increased protection warrants the direct and indirect costs of implementation. There are similar requirements, referred to as "issue finality," that apply when there are new or amended requirements for licenses, permits, and design approvals and certifications issued under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants."

The Commission changed its backfitting and issue finality policy as well as its policy on "forward fits," which it defined as requirements or staff interpretations of requirements imposed as a condition of agency approval of a licensee request that result in the modification of or addition to systems, structures, components, or design of a facility, in NRC Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests" (ML18093B087). The NRC completed draft NUREG-1409, "Backfitting Guidelines," Revision 1, in March 2020 and issued a notice of availability in the *Federal Register* for public comment

[21] The projected completion date for this activity was extended from December 31, 2023, to May 31, 2024, to provide additional time for the staff to complete the full scope of this review.

[22] 10 CFR 50.109(a)(1). Substantially similar definitions are provided in Sections 70.76, "Backfitting," 72.62, "Backfitting," and 76.76, "Backfitting," for non-reactor facilities.

(ML18109A498). The NRC received approximately 250 individual comments from members of the public, licensees, and industry representatives. The NRC staff evaluated the comments, updated the draft NUREG, and provided the Commission with the staff's proposed NUREG-1409, Revision 1 (Final Report) (ML21006A431). This revised document is currently before the Commission for its consideration.

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

Backfit Activities	Projected Completion Date	Completion Date
N/A	N/A	N/A

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Backfit Activities	Projected Completion Date
N/A	N/A

2-10 Risk-informed Activities

The NRC staff continues to make progress to advance the use of risk insights more broadly to inform decision-making. There are numerous activities ranging in scope from agencywide initiatives, such as the "Be riskSMART" initiative, which is part of the transformation efforts discussed in Section 2-1, to the advanced reactor risk-informed activities listed in Section 2-6, to individual undertakings in program and corporate offices.[23] The NRC staff continues to implement and monitor the use of the agencywide Be riskSMART risk-informed decision-making framework to inform a broad range of decisions spanning technical, legal, and corporate arenas. For example, the NRC staff continues to review and approve applications to adopt advanced risk management programs such as 10 CFR Section 50.69, "Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors," and Risk-Informed Technical Specifications Initiative 4b,[24] that provide for operational flexibilities that enhance safety by ensuring that power reactor licensees and the NRC prioritize the most risk significant issues.

The NRC staff has increased the use of risk insights in the review of new reactor applications. Specifically, in preparation for the submittal of the NuScale standard design approval application, the NRC staff collected preliminary risk insights in support of a graded review of the NuScale VOYGR 460 standard design. These risk insights were leveraged by the NRC staff in its early review of the standard design approval application by: (1) identifying focus areas for the review; (2) grading the review scope and schedule; and (3) supporting decision-making during the acceptance review of the application. The NRC staff is continuing to leverage risk insights during the technical review of the NuScale VOYGR 460 standard design approval application. In addition to facilitating an effective review, these insights, in conjunction with the use of an integrated team of reviewers from different subject areas, are being actively used to support the resolution of challenging technical issues. This use of risk insights in the NuScale VOYGR 460

[23] The NRC maintains a listing of risk-informed activities that is updated annually at https://www.nrc.gov/about-nrc/regulatory/risk-informed/rpp.html.

[24] A description of these and other operating reactors risk-informed initiatives is available at https://www.nrc.gov/about-nrc/regulatory/risk-informed/rpp/reactor-safety-operating.html. To date, the NRC has approved 28 applications enabling licensees to adopt 10 CFR Section 50.69 and 19 applications enabling licensees to adopt Risk-Informed Technical Specifications Initiative 4b.

review is aligned with the implementation of the lessons learned from the NuScale design certification application review (ML22294A144) and is an example of being a more modern risk-informed regulator.

Activities Planned and Completed for the Reporting Period (Q4 FY 2023)

Risk-Informed Activities	Projected Completion Date	Completion Date
Conducted an NRC Risk Forum (ML23255A076). Over 400 stakeholders participated in the meeting, including experts from the National Aeronautics and Space Administration (NASA), Federal Aviation Administration (FAA), and multiple industry groups and utilities. An especially engaging discussion regarding the incorporation of risk-informed decision-making (RIDM) into an organization's culture highlighted that the industry, NASA, FAA, and the NRC share similar challenges in incorporating RIDM. Stakeholders also highlighted the successes of leveraging RIDM to make safety improvements at nuclear power plants and explored the many facets of managing the various kinds of uncertainty and applying risk-informed principles to the licensing of operating, new, and advanced reactors.	09/12/23	09/12/23

Projected Activities for the Next Two Reporting Periods (Q1 and Q2 FY 2024)

Projected Risk-Informed Activities	Projected Completion Date
Complete the revision of three materials IPs associated with Inspection Manual Chapter 2800 (specifically, IP 87121, "Industrial Radiography Programs"; IP 87122, "Irradiator Programs"; and IP 87125, "Materials Processor/Manufacturer Programs"). The NRC staff is developing risk modules in each IP, with each module focusing on the risks of the relevant types of radioactive materials and their usage.	12/29/23[25]

2-11 Coronavirus Disease (COVID-19)

The NRC continues to implement precautionary measures, as needed, in response to COVID-19 to help protect the health and safety of our workforce consistent with guidance provided by the Federal Government, including the Centers for Disease Control and Prevention (CDC), as well as considerations of State and local conditions around NRC facilities. President Biden declared that the COVID-19 public health emergency ended effective May 11, 2023. Following the presidential announcement regarding the end of the public health emergency, on April 21, 2023, the NRC canceled a November 2, 2021, memorandum providing supplemental guidance on implementation of inspection programs during the pandemic (ML21295A302). The NRC returned to implementation of the inspection programs in accordance with the inspection manual and procedures effective May 11, 2023 (ML23082A106).

[25] The projected completion date for this activity was extended from September 30, 2023, to December 29, 2023, due to the need to prioritize other work. IP 87127, "Radiopharmacy Programs," which was included in the list of IPs in the previous report, is no longer in the scope of this effort and will be considered for revision in a future staff evaluation.

Licensing and Oversight Items of Interest

The NRC developed portions of its website devoted to the regulatory activities taken in response to the COVID-19 pandemic. Specific posts related to nuclear power plant licensees, nuclear materials licensees, and security and emergency preparedness are available to keep the public informed on how the NRC adapted its regulatory approach during the pandemic. Because the COVID-19 public health emergency ended on May 11, 2023, between July 1 and September 30, 2023, the NRC did not receive any requests for COVID-19-related flexibilities from nuclear materials or nuclear reactor licensees. A complete list of licensing requests approved by the NRC in response to the COVID-19 pandemic is available on the NRC public website at https://www.nrc.gov/about-nrc/covid-19/index.html.

Regulatory Activities Taken in Response to the COVID-19 Pandemic During the Reporting Period

Licensee Type	Number of COVID-19 Requests Approved During the Reporting Period	Average Number of Days to Review COVID-19 Requests[26]
Power Reactor	0	N/A
Non-Power Reactor	0	N/A
Other (e.g., topical reports)	0	N/A
Decommissioning of Nuclear Facilities and Uranium Recovery	0	N/A
Storage and Transportation of Spent Nuclear Fuel	0	N/A
Fuel Cycle Facilities	0	N/A
Medical, Industrial and Academic Uses of Nuclear Materials and Agreement States	0	N/A

[26] This average is calculated based on the dates the request is received and the review is completed; review time may be longer in cases where a supplement to a request is received after the initial submission date.

Enclosure 3 – Summary of Activities

3-1 Reactor Oversight Process (ROP) Findings

The table below provides the calendar year (CY) ROP findings for the year-to-date and 3-year rolling metrics.[27]

Location	Number of Findings	CY 2020	CY 2021	CY 2022	CY 2023
Nationally	**Total**	291	278	399	308
Region I	Green	50	61	83	57
	White	0	1	2	0
	Yellow	0	0	0	0
	Red	0	0	0	0
	Greater-Than-Green (GTG) Security	0	0	0	0
	Total	**50**	**62**	**85**	**57**
	No. of Units Operating During CY	22	21[28]	20[29]	20
Region II	Green	77	69	90	93
	White	2	0	1	1
	Yellow	0	0	0	0
	Red	0	0	0	0
	GTG Security	1	0	0	3
	Total	**80**	**69**	**91**	**97**
	No. of Units Operating During CY	33	33	33	34[30]
Region III	Green	51	65	89	65
	White	0	0	2	0
	Yellow	0	0	0	0
	Red	0	0	0	0
	GTG Security	0	1	1	0
	Total	**51**	**66**	**92**	**65**
	No. of Units Operating During CY	23	22[31]	22	21[32]
Region IV	Green	110	81	130	86
	White	0	0	1	3
	Yellow	0	0	0	0
	Red	0	0	0	0

[27] For the purposes of this report, the total number of findings per CY is based on the year in which an inspection report was issued instead of the year in which a finding was identified.
[28] The reduction of one unit for CY 2021 reflects the permanent shutdown of Indian Point Nuclear Generating Unit 2 on April 30, 2020.
[29] The reduction of one unit for CY 2022 reflects the permanent shutdown of Indian Point Nuclear Generating Unit 3 on April 30, 2021.
[30] The increase of one unit for CY 2023 reflects Vogtle Unit 3 entering the ROP on August 3, 2022.
[31] The reduction of one unit for CY 2021 reflects the permanent shutdown of Duane Arnold on August 10, 2020.
[32] The reduction of one unit for CY 2023 reflects the permanent shutdown of Palisades on May 20, 2022.

Location	Number of Findings	CY 2020	CY 2021	CY 2022	CY 2023
	GTG Security	0	0	0	0
	Total	**110**	**81**	**131**	**89**
	No. of Units Operating During CY	18	18	18	18

3-2 Licensing Actions

The tables below provide the status of licensing actions organized by licensing program. Consistent with Section 102(c) of the Nuclear Energy Innovation and Modernization Act (NEIMA), the licensing actions referenced in this section include "requested activities of the Commission" for which the Nuclear Regulatory Commission (NRC) staff issues a final safety evaluation (SE). These totals do not include license amendment requests (LARs), as they are addressed separately in Section 3-3. "Total Inventory" refers to the total number of licensing actions that are open and accepted by the NRC at the end of the quarter. "Licensing Actions Initiated During the Reporting Period" are the number of licensing actions (regardless of acceptance) that are received by the NRC during the reporting period.

Operating Reactors

Reporting Period	Total Inventory	Licensing Actions Initiated During the Reporting Period	Licensing Actions Completed During the Reporting Period[33]	Percentage of Licensing Actions Completed Prior to the Generic Milestone Schedule	Percentage of Licensing Actions Completed Prior to the Established Schedule[34]
Q1 FY 2023	128	53	36	100%	58%[35]
Q2 FY 2023	130	35	38	99%	90%[36]
Q3 FY 2023	132	55	59	100%	95%
Q4 FY 2023	114	48	64	99%	100%

[33] Requested activities included in the initiated actions total but subsequently withdrawn are not included in the completed actions total because no final SE was issued.

[34] The "established schedule" is the schedule communicated to the licensee and made publicly available at the completion of the acceptance review.

[35] This percentage is due to 2 fleet actions involving 11 requests for relief from in-service inspection requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code to extend the period of performance beyond the end of the current 10-year inspection interval (in some cases up to the end of the operating life of the plant). The review of these requests required coordination of over 25 similar relief requests from multiple licensees, additional time to resolve policy and technical issues, public meetings, and multiple rounds of requests for additional information. All reviews were completed by Q4 FY 2023.

[36] There were 5 requests that exceeded the established schedule by 180 days. These requests involved 13 licensing actions requesting relief from in-service inspection requirements of the ASME Boiler and Pressure Vessel Code to extend the period of performance beyond the end of the current 10-year inspection interval (in some cases up to the end of the operating life of the plant). One request was completed in Q2 FY 2023, and the remaining four requests were withdrawn by the licensees in Q3 FY 2023.

New Reactors

Reporting Period	Total Inventory	Licensing Actions Initiated During the Reporting Period	Licensing Actions Completed During the Reporting Period[37]	Percentage of Licensing Actions Completed Prior to the Generic Milestone Schedule	Percentage of Licensing Actions Completed Prior to the Established Schedule
Q1 FY 2023	2	2	1	100%	100%
Q2 FY 2023[38]	2	0	0	100%	100%
Q3 FY 2023	0	0	2	100%	100%
Q4 FY 2023	2	2	0	N/A	N/A

Fuel Facilities

Reporting Period	Total Inventory	Licensing Actions Initiated During the Reporting Period	Licensing Actions Completed During the Reporting Period	Percentage of Licensing Actions Completed Prior to the Generic Milestone Schedule	Percentage of Licensing Actions Completed Prior to the Established Schedule
Q1 FY 2023	4	6	10	100%	60%[39]
Q2 FY 2023	9	4	4	100%	79%[40]
Q3 FY 2023	4	4	4	100%	100%
Q4 FY 2023	3	5	6	100%	67%[41]

3-3 Licensing Amendment Request Reviews

The tables below provide the status of LARs organized by licensing program. Consistent with Section 102(c) of NEIMA, the LARs referenced in this section include “requested activities of the Commission” for which the NRC staff issues a final SE. The total inventory is the number of open LARs at the end of the quarter. LARs are included in the total inventory after they have been accepted by the NRC (the acceptance review period is generally 30 days after the application is submitted).

[37] Requested activities included in the initiated actions total but subsequently withdrawn are not included in the completed actions total because no final SE was issued.

[38] For Q2 FY 2023, the total inventory was changed from 4 to 2, the licensing actions initiated was changed from 4 to 0, and the licensing actions completed was changed from 2 to 0 to correct a reporting error from the previous report.

[39] Four out of 10 fuel cycle licensing actions exceeded the established schedule by approximately 1 month due to prioritizing other work.

[40] Two fuel cycle licensing actions exceeded the established schedule due in part to delays in receiving information from the applicant and in part due to staff prioritization of other work.

[41] Two out of six fuel cycle licensing actions exceeded the established schedule because these reviews were deferred while the NRC staff worked on higher-priority reviews.

Operating Reactors

Reporting Period	Total Inventory	LARs Submitted During the Reporting Period	LAR Reviews Completed During the Reporting Period[42]	Percentage of LAR Reviews Completed Prior to the Generic Milestone Schedule	Percentage of LAR Reviews Completed Prior to the Established Schedule[43]
Q1 FY 2023	247	74	89	100%[44]	90%[45]
Q2 FY 2023	236	76	88	100%	77%[46]
Q3 FY 2023	244	68	61	100%	97%
Q4 FY 2023	223	59	75	100%	81%[47]

New Reactors

Reporting Period	Total Inventory	LARs Submitted During the Reporting Period	LAR Reviews Completed During the Reporting Period	Percentage of LAR Reviews Completed Prior to the Generic Milestone Schedule	Percentage of LAR Reviews Completed Prior to the Established Schedule
Q1 FY 2023	0	0	1	100%	100%
Q2 FY 2023	2	4	2	100%	100%
Q3 FY 2023	6	6[48]	1	100%	100%
Q4 FY 2023	6	2	2	100%	100%

[42] Requested activities included in the submitted LARs total but subsequently withdrawn are not included in the completed LARs total because no final SE was issued.

[43] The "established schedule" is the schedule communicated to the licensee and made publicly available at the completion of the acceptance review.

[44] One review of a complex LAR exceeded the 2-year date for issuance of a final SE set in the NRC's generic milestone schedule. As required by Section 102(c)(3) of NEIMA, the NRC submitted a report regarding this LAR to the House Committee on Energy and Commerce and the Senate Committee on Environment and Public Works on August 5, 2022 (ML22217A145 and ML22173A160, respectively). The applicant provided its supplement to the LAR in April 2023, and the NRC staff expects to complete this review by April 2024. This exceedance of a generic milestone schedule will be reflected in the percentage for the quarter in which the final SE is issued.

[45] One review of an LAR that proposed two first-of-a-kind methodologies exceeded the established schedule by 180 days. The NRC staff identified complex technical issues with the application that resulted in requests for additional information, multiple public meetings, and the licensee modifying its request. The staff completed the review and issued its decision in May 2023.

[46] Reviews for 2 LARs, involving 14 actions, exceeded the established schedule, one by approximately 3.5 months and the other by approximately 3 months, due to time needed for Commission consideration and approval prior to issuance.

[47] One review of an LAR that proposed a first-of-a-kind security-related methodology exceeded the established schedule by 180 days. The complex technical issues resulted in requests for additional information, multiple closed public meetings, a site visit, and the licensee submitting supplements, including one that superseded the previous LAR. The last public meeting was on September 19, 2023, and the licensee indicated that it would discuss the options for moving forward internally and reengage with the NRC staff.

[48] The six LARs submitted during Q3 FY 2023 include one LAR submitted by SNC on April 5, 2023, but withdrawn on May 17, 2023; and five LARs submitted and accepted by the NRC staff for review. This results in six LARs for the total inventory for Q3 FY 2023 (five LARs submitted and accepted plus one LAR outstanding from Q2 FY 2023).

Fuel Facilities

Reporting Period	Total Inventory	LARs Submitted During the Reporting Period	LAR Reviews Completed During the Reporting Period	Percentage of LAR Reviews Completed Prior to the Generic Milestone Schedule	Percentage of LAR Reviews Completed Prior to the Established Schedule
Q1 FY 2023	9	3	1	100%	100%
Q2 FY 2023	9	4	4	100%	75%[49]
Q3 FY 2023	10	6	5	100%	100%
Q4 FY 2023	12	6	4	100%	50%[50]

3-4 Research Activities[51]

Summary of New Research Projects

During the reporting period, the Office of Nuclear Regulatory Research (RES) initiated research on or substantially revised the following projects:

Confirmatory Calculations for Thermal and Hydraulic Loads during Density Wave Oscillation in Helical Coil Steam Generator Tubes (NRR-2023-017)	
Importance to the NRC Mission	RES will conduct calculations, in support of the NuScale standard design approval application review, to predict the temperature, pressure, and flows during density wave oscillations that will be used to confirm results presented by the applicant in support of their helical coil steam generator stress evaluations. The Office of Nuclear Reactor Regulation (NRR) staff will use the calculated loads to conduct downstream stress analyses to confirm margins to the regulatory limits and to provide an independent evaluation of the applicant's results. The confirmatory analyses will allow NRR staff to more efficiently review the methods and stress analysis results submitted by the applicant.
Planned Activities	RES staff will assess TRACE thermal-hydraulics computer code applicability, evaluate experimental data, develop TRACE models and case matrix, and perform calculations.
Requesting Business Line	New Reactors
Estimated Completion	FY 2025
Estimate of Total Research Resources	1 Full-Time Equivalent (FTE) over a 2-year period

[49] One review of an LAR exceeded the established schedule due in part to delays in receiving information from the applicant and in part due to NRC staff prioritization of other work.

[50] Two out of four LARs exceeded the established schedule because these reviews were deferred while the NRC staff worked on higher-priority reviews.

[51] This section provides information about projects that were started or completed during the reporting period that exceeded 300 staff hours or $500K of program support for the total duration of the project.

Summary of Completed Research Projects[52]

During the reporting period, the following research projects were completed:

Assessment of Electrical Cable Condition Monitoring (NRR-2011-014 and NRR-2016-012)	
Importance to the NRC Mission	RES provided technical assistance to assess and evaluate commonly used condition monitoring methods by subjecting electrical cable samples to normal operating aging and accident conditions.
Research Results or Findings	Findings from this research provide data to support the technical basis regarding the assessment of condition monitoring methods for electrical cables. Findings are documented in two reports: one published by the National Institute of Standards and Technology (NIST) titled "Assessment of Condition Monitoring Methods of Electrical Cables" and the other published as NUREG/CR-7300. RES contracted with NIST to assess the effectiveness of eight condition monitoring methods to track the aging of cables by performing accelerated aging on cable samples to simulate 50, 60, and 80 years of use in an operating light-water reactor. Results from the NIST activities are documented in a report available in ADAMS at ML22298A160. The aged cables were subsequently subjected to loss-of-coolant accident (LOCA) tests consistent with nationally accepted standards. Following the LOCA tests, the cables were subjected to functionality tests to determine which cables passed or failed. Test results are documented in NUREG/CR-7300 (ML23237B247).
Duration of the Project	11.5 years
Estimate of Total Research Resources	15 FTE and $4.5M over the 11.5-year period

Evaluating the Reliability of Nondestructive Examinations of Vessels and Piping (NRR-2020-002)	
Importance to the NRC Mission	The research provided technical bases for NRR's assessments of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code and Code Case rulemakings, licensee relief requests, license renewal reviews, and new degradation mitigation techniques.

[52] The research project resources are estimates of staff hours and program support costs based on inspection of project records, including staffing plans and contract spending plans.

Evaluating the Reliability of Nondestructive Examinations of Vessels and Piping (NRR-2020-002)	
Research Results or Findings	RES completed twelve deliverables, including three NUREG/CRs, eight technical letter reports, and one journal article to enable NRR to better evaluate the effectiveness and reliability of nondestructive examination (NDE), including qualification requirements. RES successfully completed work for the following areas: Ultrasonic Modeling, Effects of Missed Volumetric Coverage, Human Factors in Analysis of Encoded Data, NDE of Novel Materials, Evaluate Advanced Phased Array Techniques, Automated Data Analysis, Partial Penetration Welds, Detection and Characterization of Flaws in Cast Austenitic Stainless Steel, and International Collaboration. The high-priority research evaluated the capabilities and limitations of NDE techniques used to measure the integrity of passive safety-critical nuclear power plant components.
Duration of the Project	4 years
Estimate of Total Research Resources	6 FTE and $9.15M over the 4-year period

3-5 Fees Billed

The tables below provide information on Part 170 fees billed for each fee class. For each fee class, the NRC staff compared the fees billed to the receipts estimated in the annual fee rule.[53]

Fee Class	FY 2023 Part 170 Receipts Estimated – Final Fee Rule ($M)	Part 170 Billed in Q4 FY 2023 ($M)	Total Part 170 – Billed in FY 2023 ($M)
Fuel Facilities	$9.2	$2.2	$8.6[54]
Generic Decommissioning	$4.5	$0.3	$1.7
Materials Users[55]	$1.2	$0.1	$0.9[56]
Operating Power Reactors	$158.9	$39.9	$154.5
Non-Power Production or Utilization Facilities	$4.9	$0.9	$4.7
Spent Fuel Storage/ Reactor Decommissioning	$12.4	$2.8	$12.5
Rare Earth	$0.3	$0.2	$0.4
Transportation	$3.4	$0.8	$2.8

[53] The FY 2023 Final Fee Rule was published in the *Federal Register* (FR) on June 15, 2023 (88 FR 39120).

[54] Total Part 170 – Billed in FY 2023 ($M) for Fuel Facilities may not add due to rounding: $1.289M reported in Q1 plus $2.910M reported in Q2 plus $2.261M reported in Q3 plus $2.155M in Q4 totals $8.615M.

[55] Materials Users – Billed as flat fee applications and included in the estimates and billed.

[56] Total Part 170 – Billed in FY 2023 ($M) for Materials Users reflects a correction. Specifically, Q3 should have been reported as $0.169M instead of $0.147M in the previous report. Additionally, Total Part 170 – Billed in FY 2023 ($M) for Materials Users may not add due to rounding: $0.267M reported in Q1 plus $0.383M in Q2 plus $0.169M in Q3 plus $0.086M in Q4 totals $0.906M.

Fee Class	FY 2023 Part 170 Receipts Estimated – Final Fee Rule ($M)	Part 170 Billed in Q4 FY 2023 ($M)	Total Part 170 – Billed in FY 2023 ($M)
Uranium Recovery	$0.3	$0.0	$0.3[57]

Significant Ongoing Licensing Actions

The following table includes a comparison of the fees billed to projected resources for subsequent license renewal application reviews and the Kairos Hermes 1 construction permit application review. The SHINE Medical Isotope Production Facility Operating License Application Safety and Environmental Reviews were completed during Q2 FY 2023 and have been removed from this table.

Docket	Project Name	Projected Resources ($M)[58]	Fees Billed to Date ($M)[59]
Point Beach Units 1 and 2 05000266/05000301	Point Beach Units 1 and 2 Subsequent License Renewal Application — Safety Review	$5.0[60]	$3.5
Point Beach Units 1 and 2 05000266/05000301	Point Beach Units 1 and 2 Subsequent License Renewal Application — Environmental Review	$1.4	$1.5
North Anna Units 1 and 2 05000338/05000339	North Anna Units 1 and 2 Subsequent License Renewal Application — Safety Review	$5.0[61]	$3.0
North Anna Units 1 and 2 05000338/05000339	North Anna Units 1 and 2 Subsequent License Renewal Application — Environmental Review	$1.4	$1.8[62]
Oconee Units 1, 2, and 3 05000269/05000270/ 05000287	Oconee Units 1, 2, and 3 Subsequent License Renewal Application — Safety Review	$5.0[63]	$3.8
Oconee Units 1, 2, and 3	Oconee Units 1, 2, and 3	$1.4	$1.1

[57] Total Part 170 – Billed in FY 2023 ($M) for Uranium Recovery may not add due to rounding: $0.086M reported in Q1 plus $0.126M reported in Q2 plus $0.023M reported in Q3 plus $0.035M in Q4 totals $0.271M.

[58] Projected resources are calculated based on the FTE estimates provided to applicants in the acceptance letters. Dollar amounts are obtained by multiplying the hours estimate by the professional hourly rate.

[59] The NRC bills its licensees/applicants in the first month of the quarter following the timeframe in which the work was performed. For example, NRC work performed in July, August, and September would be invoiced to the licensee/applicant in October. Therefore, the total billed amounts listed in Table 3-5 reflect costs for NRC work performed through June 2023.

[60] When the formal acceptance letter for the Point Beach subsequent license renewal application was sent to the licensee on January 15, 2021 (ML21006A417), the NRC estimated that it would take approximately $6.4M to complete the application review.

[61] When the formal acceptance letter for the North Anna subsequent license renewal application was sent to the licensee on October 13, 2020 (ML20258A284), the NRC estimated that it would take approximately $6.4M to complete the application review.

[62] The Fees Billed to Date for this review is less than the amount reported in the previous report due to a contract cost adjustment in Q4 FY 2023.

[63] When the formal acceptance letter for the Oconee subsequent license renewal application was sent to the licensee on July 22, 2021 (ML21194A245), the NRC estimated that it would take approximately $6.4M to complete the application review.

Docket	Project Name	Projected Resources ($M)[58]	Fees Billed to Date ($M)[59]
05000269/05000270/ 05000287	Subsequent License Renewal Application — Environmental Review		
St. Lucie Units 1 and 2 05000335/05000389	St. Lucie Units 1 and 2 Subsequent License Renewal Application — Safety Review	$5.0[64]	$4.0
St. Lucie Units 1 and 2 05000335/05000389	St. Lucie Units 1 and 2 Subsequent License Renewal Application — Environmental Review	$1.4	$0.4
Kairos Hermes 1 05007513	Kairos Hermes 1 – Construction Permit – Safety and Environmental Reviews	$5.5[65]	$4.7
Monticello Unit 1 05000263	Monticello Unit 1 Subsequent License Renewal Application — Safety Review	$5.1[66]	$1.3
Monticello Unit 1 05000263	Monticello Unit 1 Subsequent License Renewal Application — Environmental Review	$2.1	$0.2

3-6 Requests for Additional Information (RAIs)

The table below provides information on RAIs associated with licensing actions that are considered “requested activities of the Commission” for which the NRC staff issues a final SE, consistent with Section 102(c) of NEIMA. While Section 102(c) of NEIMA only applies to licensing actions accepted after July 13, 2019, the RAI data also include licensing actions accepted prior to July 13, 2019, to provide a complete inventory.

[64] When the formal acceptance letter for the St. Lucie subsequent license renewal application was sent to the licensee on September 24, 2021 (ML21246A091), the NRC estimated that it would take approximately $6.4M to complete the application review.

[65] The projected resource estimate was provided to Kairos Power LLC by letter dated December 15, 2021 (ML21343A214).

[66] When the formal acceptance letter for the Monticello subsequent license renewal application was sent to the licensee on February 23, 2023 (ML23047A175), the NRC estimated that it would take approximately $7.2M to complete the application review.

Type of Facility or Activity Type	Total Inventory of Open RAIs as of the End of Reporting Period	Total Number of RAIs Issued in Reporting Period	Total Number of RAIs Responded to in Reporting Period	Total Number of RAIs Closed in Reporting Period[67]
Operating Reactors	446	91	114	83
Non-Power Production and Utilization Facilities[68]	166	2	0	0
Design Certifications for New Reactors[69]	N/A	N/A	N/A	N/A
Early Site Permits for New Reactors[70]	N/A	N/A	N/A	N/A
Combined Licenses for New Reactors	0	0	0	0
Construction Permits for New Reactors or Non-Power Production and Utilization Facilities	0	0	0	0
Fuel Facilities	140	70	43	13
Power Reactor Decommissioning	88	1	17	0
Research and Test Reactor Decommissioning	12	0	0	0
Spent Fuel	241	13	12	75
Materials	14	14	0	0
Pre-Application Activities for Advanced Reactors	0	0	0	0

[67] RAIs are considered closed once the final SE, environmental assessment, or environmental impact statement is finalized except for RAIs associated with new reactor application reviews. Due to the phased approach taken over several years for new reactor application reviews, RAIs are closed throughout the review process once the staff has determined that no additional information is needed to resolve the issue.

[68] For the purposes of RAI reporting, non-power production and utilization facilities include all operating research and test reactors and medical radioisotope facilities licensed under Title 10 of the *Code of Federal Regulations* Part 50, "Domestic Licensing of Production and Utilization Facilities."

[69] No design certification applications are currently under review by the NRC; therefore, there will be no RAI data to report until an application is submitted and accepted by the NRC for review.

[70] No early site permit applications are currently under review by the NRC; therefore, there will be no RAI data to report until an application is submitted and accepted by the NRC for review.

3-7 Workforce Development and Management

FY 2023 Staffing by Office[71]

	FY 2023 Budget	FTE Utilization 06/18/23 – 07/29/23	FTE Utilization 07/30/23 – 08/26/23	FTE Utilization 08/27/23 – 09/23/23	FTE Utilization as of 09/23/23	Delta (Q4 FTE Utilization – FY 2023 Budget)	End of Year (EOY)[72] Actual Utilization	Delta (EOY Utilization – FY 2023 Budget)
Totals	2868.5[73]	323.0	213.9	213.4	2726.7	-141.8	2726.7	-141.8
COMM	42.0	3.9	2.5	2.5	33.2	-8.8	33.2	-8.8
OIG	63.0	6.0	4.1	3.8	50.9	-12.1	50.9	-12.1
Totals Other Offices	2763.5	313.2	207.4	207.1	2642.6	-120.9	2642.6	-120.9
OCFO	93.0	11.0	7.2	7.2	90.4	-2.6	90.4	-2.6
OGC	87.7	10.1	6.8	6.8	89.2	1.5	89.2	1.5
OCA	10.0	0.7	0.6	0.6	9.4	-0.6	9.4	-0.6
OCAA	7.0	0.5	0.4	0.4	5.3	-1.7	5.3	-1.7
OPA	13.0	1.6	1.1	1.0	13.7	0.7	13.7	0.7
SECY	17.0	2.0	1.3	1.3	16.3	-0.7	16.3	-0.7
OIP	35.0	4.2	2.9	2.9	33.7	-1.3	33.7	-1.3
ASLBP	20.1	2.1	1.4	1.4	18.9	-1.2	18.9	-1.2
ACRS	25.1	2.9	1.9	1.9	23.8	-1.3	23.8	-1.3
OEDO	29.0	3.2	2.2	2.2	25.4	-3.6	25.4	-3.6
NRR	555.1	60.6	40.1	40.8	508.5	-46.6	508.5	-46.6
NMSS	308.0	35.0	22.6	22.9	293.0	-15.0	293.0	-15.0
RES	198.6	22.9	15.3	14.7	186.3	-12.3	186.3	-12.3
NSIR	156.1	17.3	11.7	11.3	146.0	-10.1	146.0	-10.1
R-I	169.8	19.0	12.9	13.2	163.9	-5.9	163.9	-5.9
R-II	204.7	24.3	16.0	16.0	208.1	3.4	208.1	3.4
R-III	167.1	19.1	12.7	12.6	164.1	-3.0	164.1	-3.0
R-IV	162.9	19.0	12.5	12.5	165.2	2.3	165.2	2.3
OE	31.3	3.2	2.1	2.2	28.6	-2.7	28.6	-2.7
OI	35.0	3.4	2.3	2.3	30.3	-4.7	30.3	-4.7
OCIO	172.0	18.6	12.4	12.2	158.3	-13.7	158.3	-13.7
ADM	117.0	14.4	9.4	9.2	119.3	2.3	119.3	2.3
SBCR	13.0	1.7	1.1	1.0	13.3	0.3	13.3	0.3
OCHCO	133.0	16.1	10.3	10.4	129.7	-3.3	129.7	-3.3
CSU	3.0	0.2	0.2	0.2	1.9	-1.1	1.9	-1.1

3-8 Inspection Activities

The table below shows the average number of hours of direct inspection per plant in CY 2023.

Average ROP Direct Inspection Hours

[71] Some numbers might not add due to rounding.
[72] Based on FTE utilization as of September 23, 2023.
[73] FY 2023 budget number reflects the FY 2023 Enacted Budget.

Nationwide Per Plant (unit)	Column 1 of ROP Action Matrix (unit)	Column 2 of ROP Action Matrix (unit)	Column 3 of ROP Action Matrix (unit)	Column 4 of ROP Action Matrix
1091 Hours	1062 Hours	1300 Hours[74]	1093 Hours[75]	No Plants in Column 4

The table below shows the staff hours expended for inspection-related effort at operating power reactor sites by CY.

Items	Description	CY 2022 (Hours)	CY 2023 (Hours)
i.	Baseline Inspection	213,363	143,984
ii.	Plant-Specific Inspection	7,946	7,207
iii.	Generic Safety Issue Inspections	83	0
iv.	Performance Assessment	3,062	2,378
v.	Other Activities	97,511	67,960
vi.	Total Staff Effort	321,964	221,529
vii.	Total Staff Effort Per Operating Site	5,854[76]	4,028[77]

3-9 Backfit

Facility-Specific Backfits

No facility-specific backfits were issued during the reporting period.

Generic Backfits

No generic backfits were issued during the reporting period.

Backfit Appeals Filed by Licensees and Applicants

There were no backfit appeals submitted to the NRC during the reporting period.

[74] Davis-Besse Nuclear Power Station, Unit 1 moved to Column 2 in Q4 FY 2021 (ML22055B117). Waterford Steam Electric Station, Unit 3 moved to Column 2 in Q3 FY 2022 (ML22241A143). Quad Cities Nuclear Power Station, Unit 2 moved to Column 2 in Q4 FY 2022 (ML22313A150). Peach Bottom Atomic Power Station, Unit 2 moved to Column 2 in Q4 FY 2022 (ML22314A098). Calvert Cliffs Nuclear Power Plant, Unit 1 moved to Column 2 in Q4 FY 2022 (ML22314A100). Virgil C. Summer Nuclear Station moved to Column 2 in Q2 FY 2022 (ML22287A184). Sequoya Nuclear Plant, Units 1 and 2 moved to Column 2 in Q1 FY 2023 (ML23103A395). Columbia Generating Station moved to Column 2 in Q1 FY 2022 (ML23111A237). Browns Ferry Nuclear Plant, Unit 1 moved to Column 2 in Q2 FY 2023 (ML23115A000).

[75] Farley Nuclear Plant, Units 1 and 2 moved to Column 3 in Q4 FY 2022 (ML23089A399).

[76] Total staff effort is divided by 55 sites for CY 2022, due to Indian Point Unit 3 permanently ceasing operations in April 2021.

[77] Total staff effort is divided by 55 sites for CY 2023, due to Palisades permanently ceasing operations in June 2022 and Vogtle Unit 3 transitioning to the ROP in August 2022.