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

For the Reporting Period of April 1, 2022 through June 30, 2022

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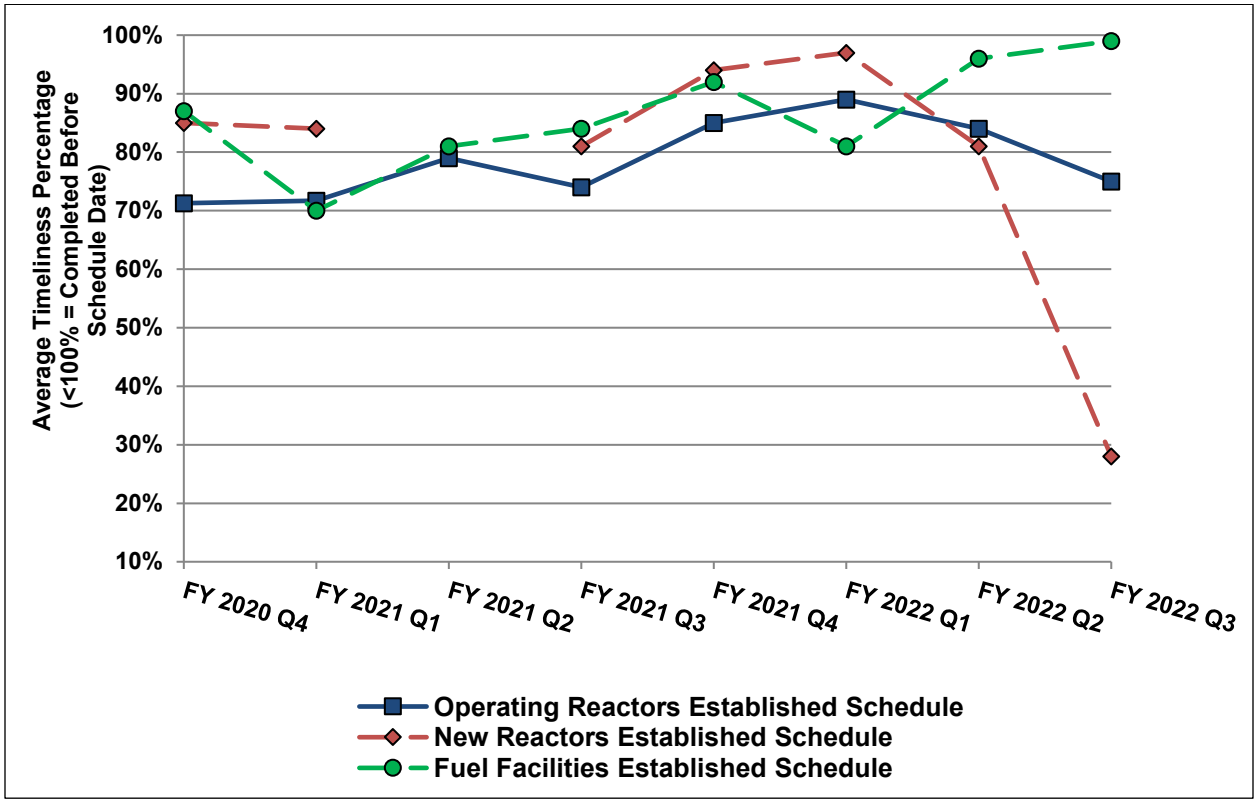
Enclosure 1 – High Level Summary

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

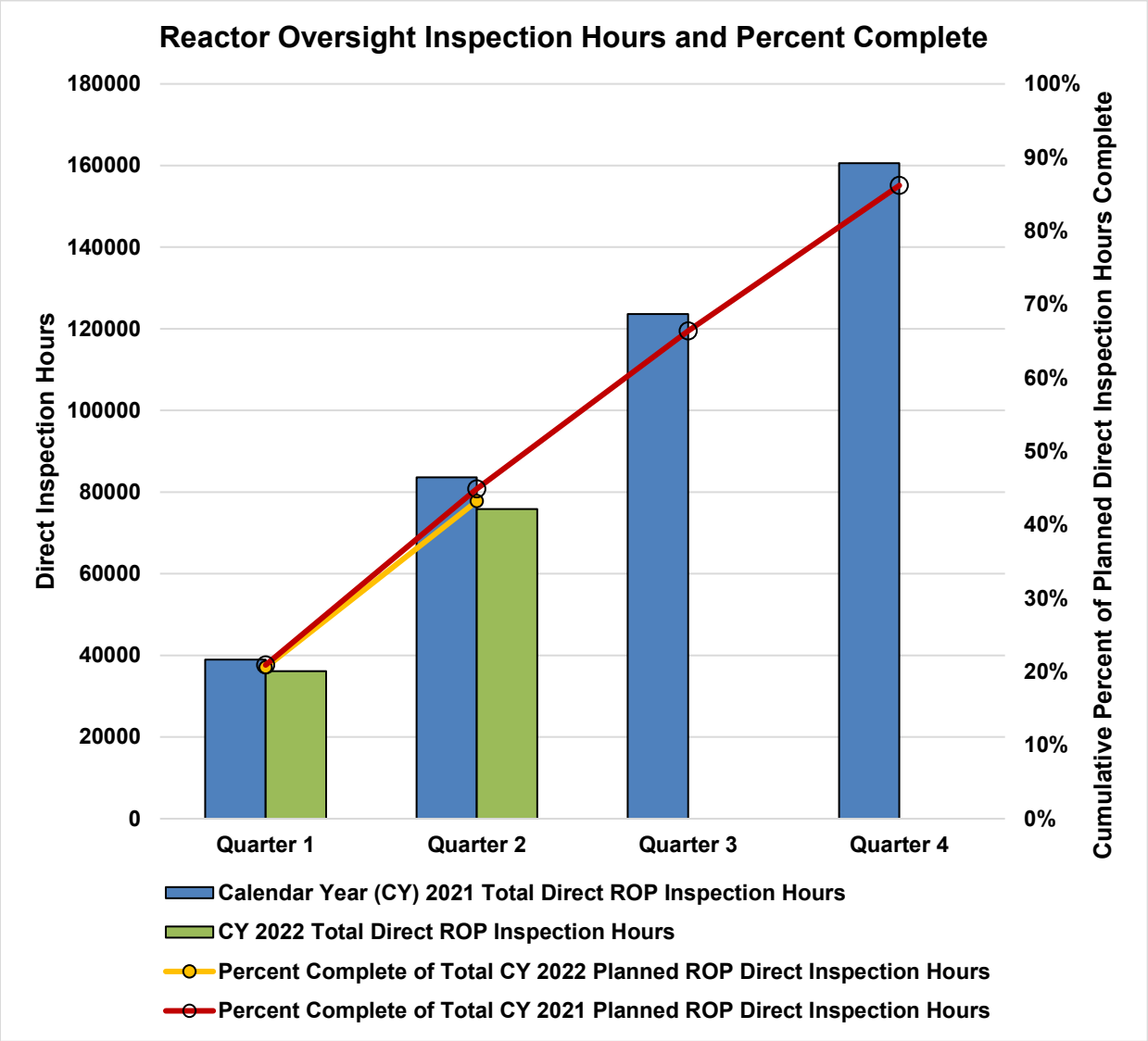


[1], [2]

[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.

[2] 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% of the established schedule, this resulted in the Q3 FY 2022 average timeliness percentage for the new reactor business line being 28%.

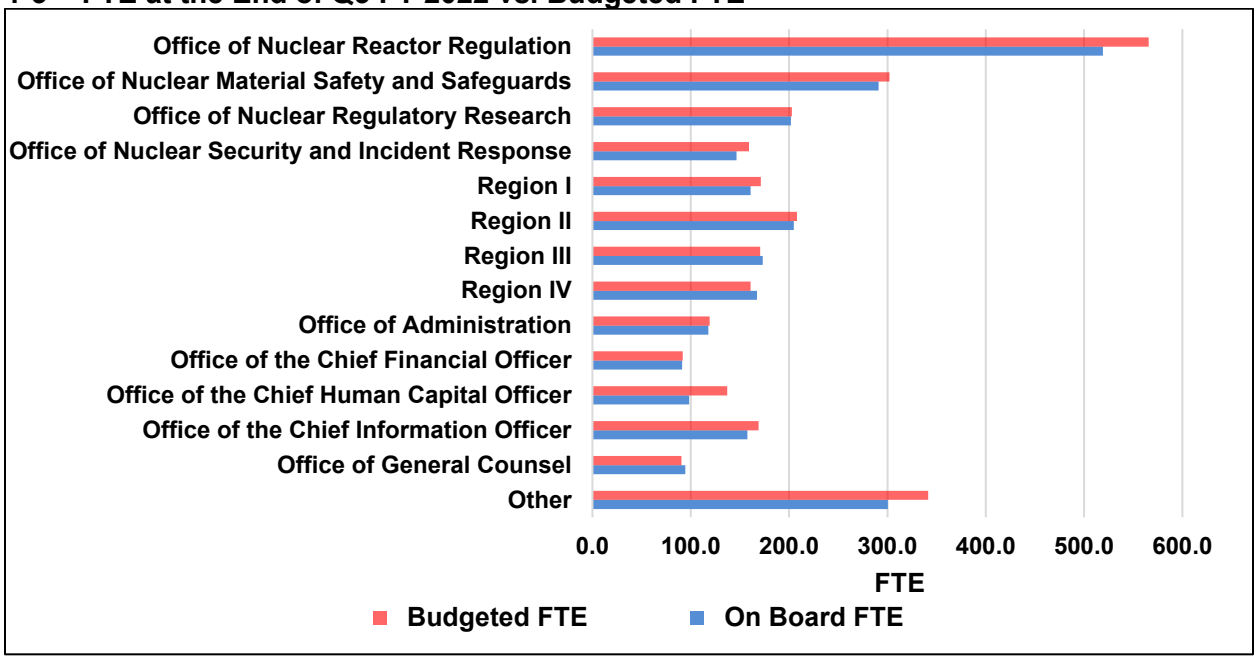
1-2 Reactor Oversight Inspection Hours and Percent Complete



[3]

[3] "Planned direct 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 Reactor Oversight Process (ROP) baseline inspection program for the calendar year.

1-3 FTE at the End of Q3 FY 2022 vs. Budgeted FTE



1-4 Budget Authority, FTE Utilization, and Fees

NRC FY 2022 Budget Authority June 30, 2022 (Dollars in Thousands)

Fund Sources	FY 2022 Budget[4]	Percent Obligated	Percent Expended
Advanced Reactors	$22,999	52%	44%
Commission Funds	$15,066	26%	26%
Fee-Based Funds	$827,339	67%	56%
General Funds[5]	$995	46%	45%
International Activities	$16,635	68%	53%
University Nuclear Leadership Program	$29,649	36%	0%
Official Representation	$27	31%	31%
Total	$912,711	65%	53%
NRC Control Points	FY 2022 Budget	Percent Obligated	Percent Expended
Nuclear Reactor Safety	$477,685	63%	58%
Nuclear Materials and Waste Safety	$108,356	73%	59%
Decommissioning and Low-Level Waste	$22,856	65%	59%
Corporate Support	$274,165	68%	49%

[4] FY 2022 Budget reflects the enactment of the Consolidated Appropriations Act, 2022 and includes the enacted budget and carryover allocated.

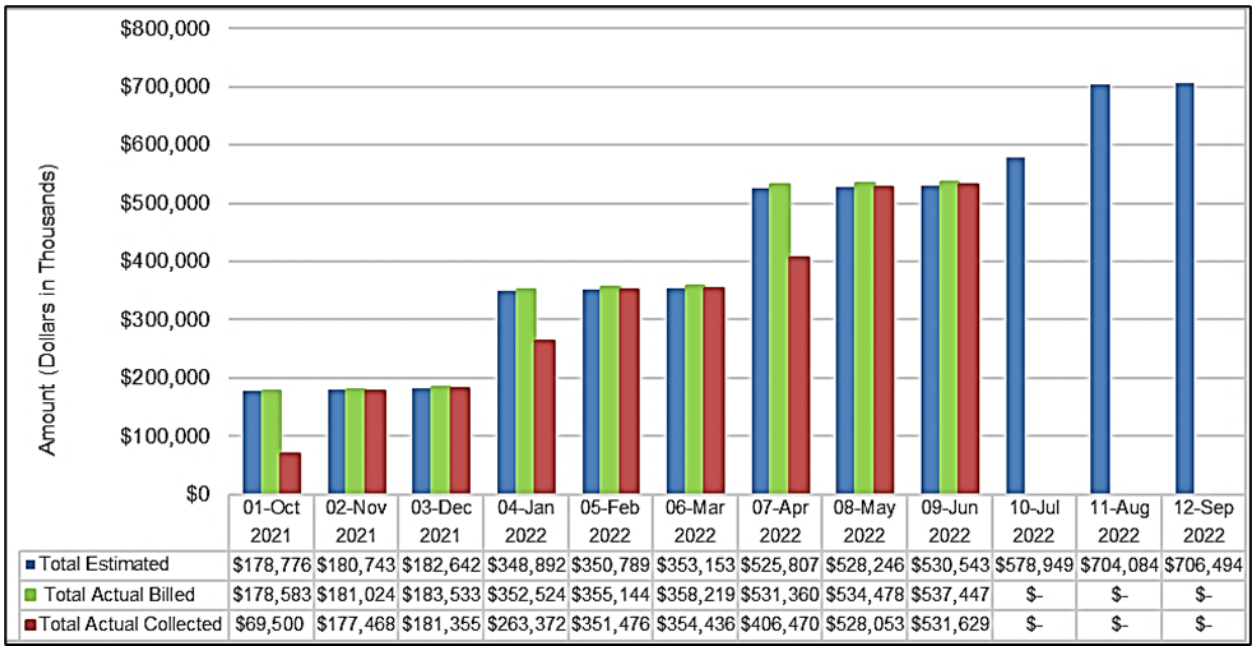
[5] Consistent with previous reports, this row represents waste incidental to reprocessing activities excluded from the fee-recovery requirement.

Fund Sources	FY 2022 Budget[4]	Percent Obligated	Percent Expended
University Nuclear Leadership Program[6]	$29,649	36%	0%
Total	$912,711	65%	53%

FTE Utilization, Hiring, and Attrition

Total Year to Date (YTD) FTE Utilization	Projected End of Year FTE Total Utilization	Quarter 3 Hiring	Quarter 3 Attrition	YTD Hiring	YTD Attrition
1965.5	2702.3	42	53	118	195

FY 2022 Fees Estimated, Fees Billed, and Fees Collected Through Q3



	01-Oct 2021	02-Nov 2021	03-Dec 2021	04-Jan 2022	05-Feb 2022	06-Mar 2022	07-Apr 2022	08-May 2022	09-Jun 2022	10-Jul 2022	11-Aug 2022	12-Sep 2022
Total Estimated	$178,776	$180,743	$182,642	$348,892	$350,789	$353,153	$525,807	$528,246	$530,543	$578,949	$704,084	$706,494
Total Actual Billed	$178,583	$181,024	$183,533	$352,524	$355,144	$358,219	$531,360	$534,478	$537,447	$-	$-	$-
Total Actual Collected	$69,500	$177,468	$181,355	$263,372	$351,476	$354,436	$406,470	$528,053	$531,629	$-	$-	$-

Total 10 CFR Part 170 Fees Billed (Dollars in Millions)

FY 2020	FY 2021	FY 2022 Q1-Q3
$205.7	$183.9	$145.8

[6] The FY 2022 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

The NRC is becoming a more modern, risk-informed regulator, open to new technologies and ways of implementing our safety and security mission. Over the past three years, the NRC has made significant 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.

To sustain progress and meet the agency's transformation goals, the NRC will use a variety of tools, including "objectives and key results" that relate to the current four focus areas (i.e., Our People, Be riskSMART, Using Technology, and Innovation). 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 (Q3 FY 2022)

Transformation Activities	Projected Completion Date	Completion Date
Conducted final assessment of survey of external stakeholder views on NRC transformation activities for calendar year (CY) 2021.	05/31/22	05/31/22
Briefed the Commission on the staff's transformation activities (public meeting). (Public meeting webcast link: https://nrc.rev.vbrick.com/#/videos/e9c7d578-1b0d-44ae-a0e8-e46348892fb9)	06/30/22	06/01/22

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected Transformation Activities	Projected Completion Date
Implement a staff-led effort to recognize NRC employees who make notable and innovative contributions towards attaining agency goals through business improvements, applying risk insights, using data in decision-making, realizing culture, enhancing the work environment, or advancing knowledge management practices.	07/31/22
Update transformation webpages on the NRC's public website to include information regarding sustaining transformational progress.	10/31/22
Conduct a full reassessment of the agency's cultural norms and behaviors to ensure the agency is sustaining transformational progress.	12/31/22

2-2 Workforce Development and Management

Each fiscal year, the NRC engages in a five-step Strategic Workforce Planning (SWP) process to improve workforce development to meet its near- 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 five 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- 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.

During the reporting period, the agency continued implementing a strategy to recruit approximately 300 new employees to conduct mission-critical work identified through the SWP process. This recruitment effort will position the agency to fulfill its important safety and security mission well into the future.

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

Workforce Development and Management Activities	Projected Completion Date	Completion Date
Completed Steps 4 (Gap Analysis and Risk Assessment) and 5 (Strategies and Action Plans) to support FY 2022 SWP activities.	06/30/22	05/31/22
Onboarded 59 Summer 2022 Student Interns and finalized plans to onboard 1 additional Summer 2022 Student Intern and 25 recent graduates who will form the 2022 Nuclear Regulator Apprenticeship Network (NRAN) cohort.	06/30/22	06/30/22
Continued implementing hiring strategy, onboarding 42 new employees during the reporting period, for a total of 118 new employees onboarded during FY 2022.	06/30/22	06/30/22

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected Workforce Development and Management Activities	Projected Completion Date
Onboard 1 additional Summer 2022 Student Intern and 25 recent graduates who will form the 2022 NRAN cohort.	07/29/22
Discuss FY 2022 SWP High Priority Critical Skill Gaps and associated Strategies and Key Activities to address the gaps at a senior leadership meeting.	09/30/22
Continue implementation of the recruitment strategy to hire a total of approximately 300 new employees in FY 2022.	09/30/22
Complete SWP Step 1, Agency Environmental Scan FY 2023 – FY 2028.	12/31/22

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 (ADAMS) 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 staff continues to review eight ATF fuel vendor topical reports that were previously submitted. The NRC staff is on track to complete review of these topical reports by FY 2025. In addition, the NRC staff received a license amendment request (LAR) on June 30, 2022 (ADAMS Accession No. ML22181B156) to allow for the use of increased enrichment lead test assemblies at Vogtle Electric Generating Plant, Units 1 and 2. The LAR, if approved, would support a fall 2023 installation into the core.

The NRC staff issued Revision 1 for Certificate of Compliance No. 9380 for the Westinghouse Model No. Traveller STD & XL transportation package (ADAMS Package No. ML22080A171). Revision 1 includes provisions for the transportation of accident tolerant fuel and fuels with higher enrichment. The NRC staff continues to review an application for a transportation package that, if approved, would be used to transport uranium hexafluoride with an enrichment up to 20 weight-percent uranium-235; the NRC staff's review of this application is expected to be completed in late CY 2022 (ADAMS Accession No. ML21181A001). The NRC expects to receive additional LARs in CY 2022 from enrichment facilities and fuel fabricators to directly support increased enrichment above 5 weight-percent uranium-235.

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

ATF Activities	Projected Completion Date	Completion Date
Issued the Regulatory Framework Applicability Assessment and associated Licensing Pathway diagram. The Regulatory Framework Applicability Assessment contains the NRC staff's analysis of the applicability of regulations and guidance for coated cladding, doped pellets, higher burnup, and increased enrichment fuels. The licensing pathway diagram shows a potential plan given the current state of the technical and regulatory processes (ADAMS Accession No. ML22014A112).	06/30/22	05/04/22
Held a public meeting regarding potential regulatory issues to consider during the development of the proposed rulemaking on increased enrichment of conventional and ATF designs for light-water reactors. This meeting provided an opportunity for the NRC staff to hear insights from the public regarding the scope of regulations and guidance documents that should be evaluated in this rulemaking effort (ADAMS Accession No. ML22153A169).	N/A[7]	06/22/22

[7] This meeting was not identified as a projected activity in the previous report. The NRC staff scheduled the meeting in response to the Commission's March 16, 2022, direction in SRM-SECY-21-0109 (ADAMS Accession No. ML22075A103) to initiate a rulemaking to amend requirements for the use of light-water reactor fuel containing uranium enriched to greater than 5 weight-percent uranium-235.

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)[8]

Projected ATF Activities	Projected Completion Date
Hold a third Higher Burnup workshop. This workshop will discuss the state of development of higher burnup and increased enrichment technical and regulatory issues. It will also provide a public forum for discussions between the NRC, industry, and other stakeholders.	09/30/22[9]

2-4 Digital Instrumentation and Control

The NRC staff continues to complete digital instrumentation and control (I&C) infrastructure improvements to address commercial grade dedication of digital equipment and protection against common cause failure (CCF). While some infrastructure improvement activities continue, the staff is transitioning to using the improved infrastructure to support the review of licensees' digital I&C modernization LARs. These activities support the NRC's vision to establish a modern, risk-informed regulatory structure with reduced uncertainty that will enable the expanded safe use of digital technologies.

During the reporting period, the NRC staff continued the development of draft regulatory guide DG-1402 to consider endorsement of NEI 17-06, "Guidance on Using IEC 61508 SIL Certification to Support the Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Related Applications." DG-1402, if finalized, will be issued as Regulatory Guide (RG) 1.250, "Dedication of Commercial-Grade Digital Instrumentation and Control Items for Use in Nuclear Power Plants." The NRC staff also started the development of DG-1374 to consider endorsement of Institute of Electrical and Electronics Engineers Standard 7-4.3.2, "Criteria for Programmable Digital Devices in Safety Systems of Nuclear Power Generating Stations." DG-1374, if finalized, will be issued as Revision 4 to RG 1.152, "Criteria for Use of Computers in Safety Systems of Nuclear Power Plants." In addition, the NRC staff began preparing a SECY paper for the Commission's consideration concerning new approaches to address digital I&C CCF to better accommodate risk-informed approaches in the digital I&C policy contained in the Staff Requirements Memorandum (SRM) to SECY-93-087 (ADAMS Accession No. ML003708056).

Several licensees are planning for digital upgrades. The NRC staff has communicated to industry that pre-application engagement can be vital to enabling efficient and effective reviews of LARs. The staff continues to conduct pre-application meetings to better understand the scope and schedule for LARs for two upcoming major digital modifications: 1) Turkey Point Power Plant Units 3 and 4 planned for July 2022, and 2) Limerick Generating Station Units 1 and 2 planned for August 2022. In advance of its planned Limerick digital I&C LAR, Constellation submitted the defense-in-depth and diversity analysis for the LAR on February 14, 2022 (ADAMS Accession No. ML22046A074), as supplemented on March 25, 2022 (ADAMS Accession No. ML22084A114), for NRC staff review. NextEra/Florida Power & Light (FPL) submitted the defense-in-depth and diversity analysis on May 3, 2022 (ADAMS Accession No. ML22123A231), for the Turkey Point LAR in advance of its digital I&C LAR.

[8] The Accident Tolerant Fuel Steering Committee has not yet approved the work priorities for FY 2023; therefore, no projected activities for Q1 FY 2023 are included.

[9] The projected completion date was modified from June 30, 2022, to September 30, 2022, to accommodate scheduling of the increased enrichment rulemaking public meeting.

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

Digital Instrumentation and Control Activities	Projected Completion Date	Completion Date
Review NEI 17-06, "Guidance on Using IEC 61508 SIL Certification to Support the Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Related Applications," and consider endorsement through issuance of an RG.		
• Conducted public meeting with stakeholders on DG-1402, following its March 2022 issuance for public comment (ADAMS Accession No. ML22090A264).	04/18/22	04/13/22
Consideration of Current CCF Policy in SRM to SECY-93-087		
• Briefed Advisory Committee on Reactor Safeguards (ACRS) Subcommittee on Digital I&C on proposed CCF changes to better accommodate risk-informed approaches.	05/20/22	05/20/22
• Conducted second stakeholders outreach meeting on the potential expansion of CCF policy (ADAMS Accession No. ML22122A063).	N/A[10]	06/08/22
Digital Modernization LAR Using the Improved Digital Regulatory Infrastructure[11]		
• Conducted eighth pre-application meeting with NextEra/FPL on the planned digital I&C LAR for Turkey Point Power Plant Units 3 and 4 (ADAMS Accession No. ML22129A181).	N/A[12]	04/13/22
• Conducted eighth pre-application meeting with Constellation on the planned digital I&C LAR for Limerick Generating Station Units 1 and 2 (ADAMS Accession No. ML22145A213).	N/A[13]	06/09/22

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected Digital Instrumentation and Control Activities	Projected Completion Date
Review NEI 17-06, "Guidance on Using IEC 61508 SIL Certification to Support the Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Related Applications," and consider endorsement through issuance of an RG.	
• Brief ACRS Subcommittee on Digital I&C on DG-1402.	07/22/22
• Issue RG 1.250, "Dedication of Commercial-Grade Digital Instrumentation and Control Items for Use in Nuclear Power Plants."	12/30/22

[10] This meeting was not identified as a projected activity in the previous report. The NRC staff scheduled the meeting in response to a request from external stakeholders.
[11] Activities reported in this section are related to planned or submitted digital changes for which the licensee is using some portion of the modernized digital regulatory infrastructure.
[12] This meeting was not identified as a projected activity in the previous report. The NRC staff scheduled the meeting in response to a licensee request.
[13] This meeting was not identified as a projected activity in the previous report. The NRC staff scheduled the meeting in response to a licensee request.

Projected Digital Instrumentation and Control Activities	Projected Completion Date
DG-1374 (Revision 4 to RG 1.152, "Criteria for Use of Computers in Safety Systems of Nuclear Power Plants")	
• Brief ACRS Subcommittee on Digital I&C to discuss DG-1374.	10/21/22
Consideration of Current CCF Policy in SRM to SECY-93-087	
• Provide SECY paper to Commission for its consideration.	07/26/22
Digital Modernization LAR Using the Improved Digital Regulatory Infrastructure.[14]	
• Conduct ninth pre-application meeting with Constellation on the planned digital I&C LAR for Limerick Generating Station Units 1 and 2.	08/31/22
• Issue a staff decision on acceptability for review of the NextEra/FPL LAR for digital modernization project at Turkey Point Units 3 and 4 within 60 days of submission by licensee.	09/30/22.[15]
• Issue a staff decision on acceptability for review of the Constellation LAR for digital modernization project at Limerick Units 1 and 2 within 60 days of submission by licensee.	11/30/22.[16]

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 to be built and operated at the Vogtle site near Augusta, GA. As a result of the COVID-19 pandemic and the dynamic nature of the Vogtle construction project, SNC now projects the start of commercial operations for Vogtle Unit 3 in Q1 FY 2023. SNC projects Vogtle Unit 4 to begin commercial operations in Q3 FY 2023 or Q4 FY 2023. The NRC staff adjusted the agency's activities and associated milestone dates to reflect the revised schedule.

During this reporting period, the NRC staff continued to perform ITAAC inspections and review ITAAC closure notifications for both Vogtle Units 3 and 4. SNC has completed nearly all the ITAAC for Vogtle Unit 3, with only 9 of 398 remaining as of July 12, 2022. The NRC staff is prepared to complete all the necessary ITAAC inspections and ITAAC closure notification reviews in a timely manner to allow the agency to make an independent determination of whether the ITAAC acceptance criteria are met. If the agency concludes that all the acceptance criteria are met, the NRC will issue a 10 CFR 52.103(g) finding, which will allow SNC to commence operation and load fuel in accordance with the terms and conditions of the COL.

[14] Activities reported in this section are related to planned or submitted digital changes for which the licensee is using some portion of the modernized digital regulatory infrastructure.

[15] The projected completion date is an estimate and assumes that the licensee will not supplement the LAR during the acceptance review. The actual date will depend on when the application is received.

[16] The projected completion date is an estimate and assumes that the licensee will not supplement the LAR during the acceptance review. The actual date will depend on when the application is received.

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

Vogtle Electric Generating Plant Units 3 and 4 Activities	Projected Completion Date	Completion Date
Conducted a public meeting to discuss SNC's proposed LAR related to the closure of security ITAAC for Unit 4 based on lessons learned from Unit 3 (ADAMS Accession No. ML22087A404).	03/31/22	03/31/22[17]
Approved a request from SNC to adopt an alternative to the requirements for inservice testing for Vogtle Units 3 and 4 (VEGP 3&4-IST-ALT-01R2) (ADAMS Accession No. ML22118A072).	09/23/22	05/13/22[18]

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected Vogtle Electric Generating Plant Units 3 and 4 Activities	Projected Completion Date
Issue a letter regarding Vogtle Unit 3's transition to the operating reactor assessment program.	08/31/22[19]
If the NRC determines that all ITAAC are met, issue the finding that all acceptance criteria contained in the Vogtle Unit 3 license are met in accordance with 10 CFR 52.103(g), after which the licensee may operate the facility in accordance with the terms and conditions of the license.	08/31/22[20]
Complete the review of a request from SNC to adopt an alternative to the requirements associated with testing of main turbine system valves for Vogtle Units 3 and 4 (VEGP 3&4-IST-ALT-02).	10/08/22

A COL allows a licensee to construct a plant and to operate it once construction is complete if certain standards identified in the COL are satisfied. These standards are called ITAAC. 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/oversight/itaac.html.

[17] This meeting was not identified as a projected activity in the previous report. SNC requested a public meeting for March 31, 2022, to discuss a future LAR based on ITAAC for Unit 4.

[18] SNC submitted Alterative Request VEGP 3&4-IST-ALT-01R2 to the NRC on March 22, 2022, and requested approval of this request at least 2 months prior to the scheduled Unit 4 fuel load date (ADAMS Accession No. ML22081A381). The staff approved the request on May 13, 2022. This activity was not forecasted to be completed in the previous report, but it was completed well ahead of schedule.

[19] The projected completion date was modified from June 30, 2022, to August 31, 2022, due to changes in the licensee's construction schedule for Vogtle Unit 3.

[20] The projected completion date was modified from June 30, 2022, to August 31, 2022, due to changes in the licensee's construction schedule for Vogtle Unit 3.

Unit	Number of ITAAC Remaining Requiring Inspection	Total Inspections Completed[21]	ITAAC Inspected[22]	ITAAC Inspections Closed[23]
Vogtle 3	9	118	37	34
Vogtle 4	124	8	6	1

ITAAC Reviews Completed for the Reporting Period (Q3 FY 2022)[24]

The table below provides ITAAC closure notification reviews completed during the reporting period for Vogtle Units 3 and 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 3	2.1.03.09b	03/31/22	04/01/22
Vogtle 3	2.3.06.07b	04/01/22	04/04/22
Vogtle 3	2.5.04.03	04/01/22	04/04/22
Vogtle 3	2.7.06.03.i	04/06/22	04/07/22
Vogtle 3	2.2.04.05a.i	04/07/22	04/08/22
Vogtle 3	3.1.00.03	04/06/22	04/12/22
Vogtle 3	E.3.9.01.01.01	04/08/22	04/12/22
Vogtle 3	2.2.05.05a.i	04/07/22	04/13/22
Vogtle 3	2.2.04.07b	04/07/22	04/13/22
Vogtle 3	2.2.02.07b.i	04/05/22	04/14/22
Vogtle 3	3.2.00.05	04/13/22	04/14/22
Vogtle 3	2.2.03.07b	04/13/22	04/15/22
Vogtle 3	2.5.02.02.i	04/13/22	04/15/22
Vogtle 3	3.3.00.05b	04/18/22	04/20/22
Vogtle 3	2.5.02.09d	04/07/22	04/21/22
Vogtle 3	2.6.01.04d	04/18/22	04/21/22
Vogtle 3	2.6.04.02c	04/19/22	04/21/22
Vogtle 3	2.5.02.06a.i	04/20/22	04/25/22
Vogtle 3	2.1.02.07b	04/22/22	04/25/22
Vogtle 3	3.2.00.09	04/22/22	04/25/22
Vogtle 3	2.4.02.02b	04/22/22	04/25/22
Vogtle 3	3.3.00.08	04/20/22	04/26/22

[21] This column includes all inspections related to Vogtle Units 3 and 4 completed during the reporting period; the column is not limited to ITAAC (e.g., quality assurance inspections).

[22] "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.

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

[24] 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.

Vogtle 3	2.2.01.10c	04/25/22	04/26/22
Vogtle 3	2.2.02.10c	04/26/22	04/26/22
Vogtle 3	2.2.03.11c.ii	04/26/22	04/27/22
Vogtle 3	3.2.00.07	04/28/22	05/02/22
Vogtle 3	2.4.02.02a	04/29/22	05/03/22
Vogtle 3	2.2.01.11a.iv	04/29/22	05/06/22
Vogtle 3	2.1.02.05a.i	05/05/22	05/11/22
Vogtle 3	2.2.04.12a.iii	05/06/22	05/11/22
Vogtle 3	2.2.03.08c.x	04/29/22	05/12/22
Vogtle 3	2.2.05.09c	05/06/22	05/12/22
Vogtle 3	2.5.02.06c.i	05/07/22	05/12/22
Vogtle 3	2.1.02.11c.ii	05/10/22	05/12/22
Vogtle 3	2.3.19.02a	05/13/22	05/16/22
Vogtle 3	2.1.02.11c.i	05/13/22	05/16/22
Vogtle 3	2.1.02.13c	05/13/22	05/16/22
Vogtle 3	2.2.03.11c.i	05/13/22	05/16/22
Vogtle 3	2.6.03.04c	05/11/22	05/18/22
Vogtle 3	2.2.03.08c.xiii	05/10/22	05/19/22
Vogtle 3	2.3.09.04b	05/12/22	05/19/22
Vogtle 3	2.3.04.10	05/18/22	05/19/22
Vogtle 3	2.5.01.02a	05/17/22	05/23/22
Vogtle 3	2.6.03.04a	05/19/22	05/24/22
Vogtle 3	2.7.05.02.i	05/20/22	05/24/22
Vogtle 3	2.7.01.14	05/20/22	05/24/22
Vogtle 3	2.6.05.02.ii	05/23/22	05/24/22
Vogtle 3	3.3.00.07d.i	05/05/22	05/25/22
Vogtle 3	2.2.05.07c	05/20/22	05/26/22
Vogtle 3	2.2.03.11a.i	05/27/22	06/01/22
Vogtle 3	2.2.03.05a.i	05/31/22	06/01/22
Vogtle 3	3.3.00.07c.ii.b	04/20/22	06/02/22
Vogtle 3	2.2.03.11b.i	05/27/22	06/03/22
Vogtle 3	2.2.05.07a.i	06/01/22	06/06/22
Vogtle 3	2.1.02.11a.i	05/31/22	06/09/22
Vogtle 3	2.1.02.11b.i	05/31/22	06/09/22
Vogtle 3	2.6.03.04i	06/02/22	06/14/22
Vogtle 3	3.3.00.07d.iii.c	06/13/22	06/16/22
Vogtle 3	2.6.01.04e	06/16/22	06/17/22
Vogtle 3	2.5.04.02.i	06/16/22	06/17/22
Vogtle 3	2.5.02.08a.ii	06/14/22	06/21/22

Vogtle Units 3 and 4 License Amendment Request Reviews Completed (Q3 FY 2022)

Number of License Amendment Request Reviews Forecast to be Completed in the Reporting Period	Number of License Amendment Request Reviews that Were Completed in the Reporting Period
0	0

2-6 NuScale Small Modular Reactor Design Certification

On March 15, 2017, the NRC accepted the NuScale Power, LLC (NuScale) application for a small modular reactor (SMR) design certification review. The NRC staff completed the final Safety Evaluation Report on August 28, 2020 (ADAMS Package No. ML20023A318), and issued a standard design approval to NuScale on September 11, 2020 (ADAMS Accession No. ML20247J564). On January 14, 2021, the NRC staff provided the Commission with a draft proposed rule that proposes certifying the design for its consideration (ADAMS Package No. ML19353A003). On May 6, 2021, the Commission approved the publication of the proposed rule (ADAMS Package No. ML21126A153), and on July 1, 2021, the proposed rule was published for public comment in the *Federal Register* (FR) (86 FR 34999) with a comment period ending August 30, 2021. During the public comment period, the staff received a request, submitted on behalf of two public interest groups, to extend the public comment period (ADAMS Accession No. ML21209A763). On August 24, 2021, the NRC staff published a FR notice extending the public comment period by 45 days to October 14, 2021 (86 FR 47251). The NRC staff was scheduled to provide the draft final rule to the Commission by March 25, 2022. Due to additional time needed to resolve technical comments, the draft final rule was provided to the Commission on July 1, 2022, for its consideration (ADAMS Package No. ML22004A002).

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

NuScale Small Modular Reactor Design Certification Activities	Projected Completion Date	Completion Date
Provided the Commission the draft final rule for its consideration (ADAMS Package No. ML22004A002).	N/A[25]	07/01/22

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected NuScale Small Modular Reactor Design Certification Activities	Projected Completion Date
Publish final rule in the FR.	11/25/22

2-7 Advanced Nuclear Reactor Technologies

The NRC continues to make significant progress in preparation for reviewing non-light-water-reactor (non-LWR) designs, consistent with the NRC staff's vision and strategy (ADAMS Accession No. ML16356A670) and implementation action plans to achieve non-LWR safety

[25] In the previous report, the projected completion date for this activity was to be determined as the schedule for providing the draft final rule to the Commission was being revised to resolve technical comments.

review readiness.[26] During this reporting period, the NRC staff continued its extensive stakeholder engagement, including holding several public meetings and workshops regarding various advanced reactor topics, development of Framework A (the probabilistic risk assessment-led licensing approach) and Framework B (the licensing approach where risk insights are used in a supporting role) of the 10 CFR Part 53 preliminary proposed rule, and development of guidance for the content of advanced reactor licensing applications.

In addition, the NRC staff continues to release portions of the 10 CFR Part 53 preliminary proposed rule language, including technical, licensing, and administrative requirements on an iterative basis for public comment and discussion during public meetings conducted by the staff. During the reporting period, the NRC staff issued a second consolidated version of the Framework A preliminary proposed rule language, covering Subparts A–K for (A) general provisions, (B) safety criteria, (C) design and analyses, (D) siting, (E) construction and manufacturing, (F) operational programs (published separately), (G) decommissioning, (H) siting and design approval processes, (I) maintenance of the licensing basis, (J) reporting requirements, and (K) quality assurance, as well as sections related to security, access authorization, and fitness-for-duty (ADAMS Accession No. ML22125A000). The staff also released initial consolidated preliminary proposed rule language for Framework B (ADAMS Accession No. ML22145A000). Framework B covers Subparts N–U for (N) definitions, (O) construction and manufacturing, (P) operations, (Q) decommissioning, (R) siting and design approval processes, (S) maintenance of the licensing basis, (T) reporting requirements, and (U) quality assurance. The NRC staff discussed portions of the released preliminary proposed rule language with stakeholders during public meetings on May 25, June 16, and June 30, 2022 (ADAMS Accession Nos. ML22131A016, ML22152A044, and ML22179A365). On May 19, 2022, the NRC staff briefed the ACRS Regulatory Rulemaking, Policies and Practices: Part 53 Subcommittee (formerly the Future Plant Designs Subcommittee) on the Framework A subparts, with the exception of Subpart F. On June 15, 2022, the NRC staff released a new iteration of the preliminary proposed rule language discussion table for Framework A, Subpart F, “Requirements for Operation” (ADAMS Accession No. ML22165A265). On June 23 and 24, 2022, the NRC staff briefed the ACRS Regulatory Rulemaking, Policies and Practices: Part 53 Subcommittee on the Framework B subparts, Subpart F of Framework A, and the Alternative Evaluation for Risk Insights pre-decisional draft guidance. Details of these ACRS meetings can be found on the NRC’s public website (https://www.nrc.gov/reading-rm/doc-collections/acrs/agenda/index.html).

The NRC staff is scheduled to provide the Commission the Part 53 draft proposed rule package by February 2023 and the draft final rule package, including key guidance, by December 2024. The NRC staff’s goal is to issue the final rule by July 2025. Further details about the Part 53 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).

The NRC holds periodic stakeholder meetings to discuss non-LWR 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/details.html#stakeholder). The NRC also holds frequent public meetings regarding the Advanced Reactor Content of Application Project (ARCAP). A list of these meetings and related preliminary draft guidance documents to support the meetings can be found on the NRC’s public website (https://www.nrc.gov/reactors/new-reactors/advanced/details.html#advRxContentAppProj).

[26] 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).

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 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 (Q3 FY 2022)

Advanced Nuclear Reactor Technologies Activities	Projected Completion Date	Completion Date
Issued final safety evaluation (SE) to Kairos for its topical report on mechanistic source term (ADAMS Accession No. ML22112A133).	04/30/22	04/22/22
Issued final SE to Kairos for its topical report on regulatory analysis (ADAMS Accession No. ML22136A089).	04/30/22	05/26/22[27]
Released preliminary proposed rule language for 10 CFR Part 53 traditional, risk-informed alternatives (ADAMS Accession No. ML22145A000).	06/30/22	06/10/22

Projected Activities for the Next Two Reporting Periods (Q3 and Q4 FY 2022)

Projected Advanced Nuclear Reactor Technologies Activities	Projected Completion Date
Submit draft proposed rule providing the alternative physical security requirements for advanced reactors to the Commission for its consideration.	07/29/22[28]
Issue final SE to X-energy for its topical report on risk-informed performance-based approach.	08/01/22
Issue Technology-Inclusive Content of Application (TICAP) Guidance and ARCAP Guidance for public comment.	08/31/22[29]
Publish the final RG (RG 1.246) for potential endorsement of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI, Division 2, Reliability and Integrity Management standard.	09/30/22[30]
Issue final SE to Kairos for its topical report on metallic material qualification program.	11/30/22[31]

[27] Issuance of the final SE was delayed in order to address clarifying questions from Kairos regarding applicability of the topical report to its Hermes testing facility.
[28] The projected completion date was extended from June 28, 2022, to July 29, 2022, to support the development of comprehensive draft guidance and completion of the draft proposed rule package.
[29] The projected completion date was extended from May 31, 2022, to August 31, 2022, due to prioritization of the development of Part 53 draft preliminary proposed rule text.
[30] The projected completion date was extended from June 30, 2022, to September 30, 2022, to coincide with the projected publication of the 2019-2020 ASME Code final rule. The NRC's endorsement of the ASME Boiler and Pressure Vessel Code Section XI, Division 2, is dependent on the endorsement and conditions for the 2019 edition of ASME Boiler and Pressure Vessel Code Section XI, Division 1 via the 2019-2020 ASME Code final rule.
[31] The projected completion date was extended from September 30, 2022, to November 30, 2022, in response to the delayed submittal of revision 2 of the topical report.

Projected Advanced Nuclear Reactor Technologies Activities	Projected Completion Date
Issue final SE to Kairos for its topical report on graphite materials qualification.	11/30/22[32]
Issue final SE to Kairos for its topical report on fuel qualification methodology.	12/30/22[33]
Issue NUREG/CR on Fuel Qualification for Molten Salt Reactors.	12/30/22
Provide SECY paper on options for a fusion regulatory framework to the Commission for its consideration.	12/30/22
Issue interim staff guidance on non-LWR probabilistic risk assessment standard applicability for initial licensing.	12/30/22

2-8 Advanced Reactor Licensing Reviews

Kairos Hermes Construction Permit Application Review

Kairos Power LLC (Kairos) submitted an application for a construction permit for the Kairos Power Fluoride Salt-Cooled, High Temperature Non-Power Reactor (Hermes). Kairos submitted applications documents to the NRC by letters dated September 29, 2021 (submitting the Preliminary Safety Analysis Report) (ADAMS Package No. ML21272A375), and October 31, 2021 (submitting the Environmental Report) (ADAMS Accession No. ML21306A131).

The NRC staff performed an acceptance review of the Hermes construction permit application and docketed the application on November 29, 2021 (ADAMS Accession No. ML21319A354). On December 15, 2021, the staff issued a letter to Kairos (ADAMS Accession No. ML21343A214) providing the schedule and resource estimates for the review. The NRC staff is currently conducting a detailed technical review of the safety of the Hermes design, which will lead to a safety evaluation report. The NRC staff is also conducting a review of the effects of Hermes design on the environment and will document the review in a draft environmental impact statement. 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).

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

Advanced Reactor Licensing Review Activities	Projected Completion Date	Completion Date
None.		

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

[32] The projected completion date was extended from September 30, 2022, to November 30, 2022, in response to the delayed submittal of revision 2 of the topical report.

[33] The projected completion date was extended from August 31, 2022, to December 30, 2022, to resolve concerns about the fuel burnup limits requested in the topical report.

Projected Advanced Reactor Licensing Review Activities	Projected Completion Date
Identify if any need for additional information on the Kairos Hermes construction permit application, complete regulatory audits, evaluate any additional docketed information, and update the safety evaluation report accordingly.	11/15/22

2-9 Reactor Oversight Process

The Reactor Oversight Process (ROP) is a risk-informed, performance-based oversight program that contains provisions for continuous self-assessment and improvement. The NRC staff developed recommendations for proposed changes to the ROP in SECY-18-0113, "Recommendations for Modifying the Reactor Oversight Process Engineering Inspections" (ADAMS Accession No. ML18144A567), and SECY-19-0067, "Recommendations for Enhancing the Reactor Oversight Process" (ADAMS Accession No. ML19070A050). The staff requested to withdraw these papers, and on August 5, 2021, the Commission approved the staff's proposed withdrawal (ADAMS Accession No. ML21217A284). The staff plans to revisit the recommendations in these withdrawn papers prior to the end of FY 2022, as discussed with external stakeholders at the January, March, and May ROP bi-monthly public meetings.[34] The staff also continues to assess and improve the ROP as part of its normal work practices through the NRC's transformation activities, stakeholder correspondence, feedback from ROP public meetings, and the ROP self-assessment program. The staff 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" (ADAMS Accession No. ML17347B670).

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

Reactor Oversight Process Activities	Projected Completion Date	Completion Date
Completed CY 2021 ROP Self-Assessment and provided an information paper to the Commission (ADAMS Package No. ML22033A288).	04/15/22	04/08/22
Provided a paper to the Commission for its consideration recommending whether a revision should be made to the frequency of engineering inspections (ADAMS Package No. ML22080A253).	05/13/22	06/07/22[35]
Briefed the Commission on the results of the Agency Action Review Meeting (ADAMS Accession Nos. ML22160A391 and ML22160A669).	06/16/22[36]	06/16/22

[34] The ROP bi-monthly public meeting summaries are available at ADAMS Accession Nos. ML22034A766, ML22091A184, and ML22159A212.
[35] Issuance delayed from the previous projected date of May 13, 2022, to provide additional time for the staff to review the content of the Commission paper.
[36] This activity was inadvertently omitted as a projected activity in previous reports.

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected Reactor Oversight Process Activities	Projected Completion Date
Send a paper to the Commission with options for the frequency of problem identification and resolution team inspections.	08/19/22[37]
Send a paper to the Commission recommending whether a revision should be made to the emergency preparedness significance determination process.	08/31/22
Send a paper to the Commission recommending whether the minimum four quarter requirement for greater-than-green findings, coupled with a revision to the treatment of greater-than-green performance indicators should be eliminated.	09/30/22
Complete an effectiveness review of the incorporation of safety culture oversight into the ROP.	09/30/22
Complete a ROP program area evaluation on the Significance Determination Process timeliness.	09/30/22
Send a paper to the Commission recommending whether the Alert and Notification System Performance Indicator should be eliminated.	12/31/22

2-10 Backfit

The NRC's backfitting rules are codified in 10 CFR 50.109, 70.76, 72.62, and 76.76. 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…."[38] 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.

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" (ADAMS Accession No. ML18093B087). The NRC completed draft NUREG-1409, "Backfitting Guidelines," Revision 1, in March 2020 and issued a notice of availability in the FR for public comment (ADAMS Accession No. ML18109A498). This revision would provide additional guidance for the NRC staff on how to implement the Commission's backfitting and issue finality regulations and policies and forward fitting policy, including how to process violations that are

[37] The projected completion date was extended from June 30, 2022, to August 18, 2022, to provide additional time for the staff to review the content of the Commission paper.

[38] 10 CFR 50.109(a)(1). Substantially similar definitions are provided in § 70.76, "Backfitting," § 72.62, "Backfitting," and § 76.76, "Backfitting," for non-reactor facilities.

contested based on claims of unjustified backfitting. 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) (ADAMS Package No. ML21006A431). This revised document is currently before the Commission for its consideration.

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

Backfit Activities	Projected Completion Date	Completion Date
Provided to the Commission a draft proposed rule that contains a proposed change to NRC regulations that would constitute backfitting if issued as a final rule: Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing (ADAMS Package No. ML21159A055).	05/26/22	06/06/22[39]

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected Backfit Activities	Projected Completion Date
Issue the Fitness-for-Duty Drug Testing Requirements Final Rule, which will constitute backfitting.	10/31/22

2-11 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 2-7, to individual undertakings in program and corporate offices.[40] The NRC staff continues to implement and track 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 50.69, "Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors" and Risk-Informed Technical Specifications Initiative 4b,[41] that provide for operational flexibilities that enhance safety by ensuring that power reactor licensees and the NRC prioritize the most risk significant issues.

[39] The projected completion date was May 26, 2022, and the proposed rule was provided to the Commission on June 6, 2022. Due to availability, management needed an additional 10 days for the review.

[40] 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.

[41] 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 and 19 applications enabling licensees to adopt 10 CFR 50.69 and Risk-Informed Technical Specifications Initiative 4b, respectively.

Activities Planned and Completed for the Reporting Period (Q3 FY 2022)

Risk-Informed Activities	Projected Completion Date	Completion Date
Completed a pilot program of the Risk Tool to risk-inform technical reviews for spent nuclear fuel dry storage (ADAMS Accession No. ML20318A269).	04/30/22	03/17/22
Completed the revision of 10 materials inspection procedures (IPs) associated with Inspection Manual Chapter 2800. The NRC staff developed risk modules in each IP, with each module focusing on the risks of the relevant types of radioactive materials and their usage.[42]	05/31/22	04/26/22
Completed guidance for expanding the use of Risk-Informed Process for Evaluations (RIPE) to Technical Specification LARs (ADAMS Accession Nos. ML22088A135 and ML22088A136).	06/30/22	05/10/22

Projected Activities for the Next Two Reporting Periods (Q4 FY 2022 and Q1 FY 2023)

Projected Risk-Informed Activities	Projected Completion Date
Complete LIC-504 assessment of the risk significance of high energy arcing faults and issue report with recommendations for any regulatory actions based on the risk insights from the assessment.	07/22/22
Complete Be riskSMART evaluation of IP 71152, "Problem Identification and Resolution," team inspection periodicity and provide a paper to the Commission.	08/19/22
Develop an Assessments and Observations report on early lessons learned during acceptance reviews from the pilot program for the Risk Tool to risk-inform technical reviews for spent nuclear fuel dry storage (ADAMS Accession No. ML20318A269).	09/30/22
Provide a paper to the Commission recommending whether to revise the Emergency Preparedness Significance Determination Process Failure to Comply assessment methodology to risk-inform areas susceptible to Greater-Than-Green inspection findings.	09/30/22
Complete the revision of four materials IPs associated with Inspection Manual Chapter 2800 (specifically, IP 87121, "Industrial Radiography Programs"; IP 87122, "Irradiator Programs"; IP 87125, "Materials Processor/Manufacturer Programs"; and IP 87127, "Radiopharmacy Programs"). The NRC staff is developing risk modules in each IP, with	12/31/22

[42] The ten IPs are IP 87123, "Well Logging and Tracer Study Programs" (ADAMS Accession No. ML22062B654); IP 87124, "Fixed Nuclear Gauge Programs" (ADAMS Accession No. ML22046A218); IP 87126, "Broad Scope Academic and Research & Development Programs" (ADAMS Accession No. ML22046A277); IP 87130, "Nuclear Medicine Programs" (ADAMS Accession No. ML22063A454); IP 87139, "Portable Nuclear Gauge Programs" (ADAMS Accession No. ML22048A180); IP 87140, "Source, Special Nuclear Material, and Other Alpha Emitter Use Programs" (ADAMS Accession No. ML22048C210); IP 87141, "Limited Scope Academic and Research & Development Programs Including Animal Use" (ADAMS Accession No. ML22053A005); IP 87142, "Sealed Sources and Devices (Other) Used in Measuring Systems, Analytical Instruments, Calibration and Checking of Instruments, and Similar Purposes" (ADAMS Accession No. ML22053A019); IP 87143, "Self-Shielded Irradiator and Calibrator Devices" (ADAMS Accession No. ML22053A100); and IP 87144, "Veterinary Use Programs" (ADAMS Accession No. ML22053A244).

each module focusing on the risks of the relevant types of radioactive materials and their usage.	

2-12 Coronavirus Disease (COVID-19) Pandemic

The NRC COVID-19 Coordination Team (including a COVID-19 Task Force and Working Group) continues to develop and implement precautionary measures in response to the pandemic 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. In addition, the NRC continues to protect public health and safety and the environment. The NRC is monitoring the effects of the COVID-19 pandemic on NRC-licensed activities as well as actions taken in response to State, local, and site-specific conditions. The NRC is poised to take additional steps as warranted.

NRC Occupancy of Facilities

During this reporting period, the NRC continued to operate in a hybrid work environment at all locations, combining telework and in-office staff presence. The guidance for inspection program implementation remains in effect in accordance with memorandum, “Implementation of Inspection Programs Following Re-Entry from the Public Health Emergency for the Reactor Safety Program” (ADAMS Accession No. ML21295A302). The agency continues to closely monitor guidance from the Federal Government’s Safer Federal Workforce Taskforce, the CDC, and the Occupational Safety and Health Administration to facilitate a healthy and safe physical workspace.

Licensing and Oversight Items of Interest

The NRC staff has taken steps to identify areas of our regulations that are challenging during the pandemic, and the areas where temporary flexibilities, such as exemptions, would not compromise the ability of licensees to maintain the safe and secure operation of NRC-licensed facilities. The NRC staff has communicated the processes available to licensees for requesting these flexibilities in a transparent way through public communications, such as teleconferences, webcasts, and letters. In addition, these processes and the approved flexibilities are posted and updated on the NRC public website (https://www.nrc.gov/about-nrc/covid-19/).

The NRC has also 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 have been developed to keep the public informed on how the NRC is adapting its regulatory approach during the pandemic. Between April 1 and June 30, 2022, the NRC approved one licensing action granting temporary flexibilities to maintain the safe and secure operation of a nuclear materials licensee. The NRC did not receive any requests for COVID-19-related flexibilities from nuclear reactor licensees during the reporting period. 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/.

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[43]
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	1	77

[43] 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 Findings

The table below provides the calendar year (CY) Reactor Oversight Process (ROP) findings for the year-to-date (YTD) and 3-year rolling metrics.[44]

Location	Number of Findings	CY 2019	CY 2020	CY 2021	CY 2022
Nationally	**Total**	440	291	278	160[45]
Region I	Green	95	50	61	41
	White	0	0	1	0
	Yellow	0	0	0	0
	Red	0	0	0	0
	Greater Than Green Security	0	0	0	0
	Total	**95**	**50**	**62**	**41**
	No. of Units Operating During CY	24	21[46]	21	20[47]
Region II	Green	110	77	69	41
	White	1	2	0	0
	Yellow	0	0	0	0
	Red	0	0	0	0
	Greater Than Green Security	0	1	0	0
	Total	**111**	**80**	**69**	**41**
	No. of Units Operating During CY	33	33	33	33
Region III	Green	96	51	65	29
	White	1	0	0	1
	Yellow	0	0	0	0
	Red	0	0	0	0
	Greater Than Green Security	0	0	1	1
	Total	**97**	**51**	**66**	**31**
	No. of Units Operating During CY	23	22[48]	22	22
Region IV	Green	137	110	81	47

[44] For the purposes of this report, the total number of findings per calendar year is based on the year in which an inspection report was issued instead of the year in which a finding was identified. The latter approach was used to describe the inspection finding trend in SECY-22-0029, "Reactor Oversight Process Self-Assessment for Calendar Year 2021" (ADAMS Accession No. ML22033A288), which shows the first year-over-year increase in green inspection findings since CY 2011.

[45] The inspection reports for the second quarter of CY 2022 will continue to be finalized through August 15, 2022. The report for the next reporting period will be updated to include any additional findings from the second quarter of CY 2022.

[46] The reduction of three units for CY 2020 reflects the permanent shutdown of Pilgrim Nuclear Station on May 31, 2019; Three Mile Island, Unit 1, on September 20, 2019; and Indian Point Nuclear Generating Unit 2 on April 30, 2020.

[47] The reduction of one unit for CY 2022 reflects the permanent shutdown of Indian Point Nuclear Generating Unit 3 on April 30, 2021.

[48] The reduction of one unit for CY 2020 reflects the permanent shutdown of Duane Arnold on August 10, 2020.

Location	Number of Findings	CY 2019	CY 2020	CY 2021	CY 2022
	White	0	0	0	0
	Yellow	0	0	0	0
	Red	0	0	0	0
	Greater Than Green Security	0	0	0	0
	Total	**137**	**110**	**81**	**47**
	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 NEIMA, the licensing actions referenced in this section include "requested activities of the Commission" for which the U.S. 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	Percentage of Licensing Actions Completed Prior to the Generic Milestone Schedule	Percentage of Licensing Actions Completed Prior to the Established Schedule[49]
Q4 FY 2021	207	83	95	100%	94%
Q1 FY 2022	132	33	107	100%	94%
Q2 FY 2022	144	103	93	100%	95%
Q3 FY 2022	136	41	43	100%	100%

New Reactors

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
Q4 FY 2021	2	1	1	100%	100%

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

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 2022	2	3	3	100%	100%
Q2 FY 2022	1	0	1[50]	N/A	N/A
Q3 FY 2022	2	1	1	100%	100%

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
Q4 FY 2021	4	3	3	100%	0%[51]
Q1 FY 2022	2	11	13	100%	92%[52]
Q2 FY 2022	6	8	4	100%	75%
Q3 FY 2022	6	6	6	100%	100%

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).

Operating 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[53]
Q4 FY 2021	293	106	102	100%	91%

[50] During the reporting period, the NRC staff denied, without prejudice, the Oklo Aurora combined license application and terminated all review activities.

[51] One licensing action was complex; the other three actions were completed within 13 days of the established schedule. All the licensing actions were completed within the generic milestone schedule.

[52] One licensing action was complex due to security issues, which resulted in it exceeding the established schedule by 17 days.

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

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[53]
Q1 FY 2022	317	105	81	99%	95%[54]
Q2 FY 2022	304	72	94	100%	99%
Q3 FY 2022	289	78	93	100%	91%

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
Q4 FY 2021	1	1	1	100%	100%
Q1 FY 2022	0	0	1	100%	100%
Q2 FY 2022	0	0	0	N/A	N/A
Q3 FY 2022	0	0	0	N/A	N/A

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
Q4 FY 2021	13	7	4	100%	100%
Q1 FY 2022	5	5	13	100%	100%
Q2 FY 2022	11	12	7	100%	100%
Q3 FY 2022	10	4	5	100%	60%

[54] One review of an LAR that proposed a first-of-a-kind design exceeded the established schedule by 180 days. The NRC staff identified an issue that resulted in the licensee submitting an update that expanded the licensee's proposed submission and extended the staff's review. The staff issued the SE on February 28, 2022.

3-4 Research Activities[55]

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:

Request for Support to Develop and Maintain Technical Guidance Related to Risk-Informed Materials Assessments (NRR-2022-008)	
Importance to the NRC Mission	As a result of the agency's transformation efforts to become a modern risk-informed regulator, risk insights will be used with increasing frequency in reactor licensing activities that involve materials assessments related to passive, long-lived structures, systems, and components. Current regulatory guidance and related tools available for risk-informed materials assessments rely heavily on engineering judgment and ad hoc evaluations of risk that might not systematically evaluate risk or be consistent from one assessment to another. Additionally, the available guidance and tools could be more consistent with the NRC Probabilistic Risk Assessment policy statement and the related agency transformation efforts to become a more modern risk-informed regulator. This effort will result in regulatory guidance that provides a structured and systematic approach for risk-informed materials assessments associated with reactor licensing activities.
Planned Activities	Activities include providing technical expertise to support the development of a technical basis to support risk-informed materials assessments, engaging internal and external stakeholders to obtain feedback on the technical basis, supporting the development of draft and final guidance documents, and implementing internal training.
Requesting Business Line	Operating Reactors
Estimated Completion	FY 2026
Estimate of Total Research Resources	3.75 FTE over a 5-year period

[55] 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.

Regulatory Research in Support of Licensing and Certification Activities for Enrichment, Fabrication, Transportation and Storage of Advanced Non-Light Water Reactor Fuels (NMSS-2022-002)	
Importance to the NRC Mission	The Office of Nuclear Material Safety and Safeguards requested RES assistance with preparing for licensing and certification activities pertaining to non-light-water (non-LWR) reactors, such as developing regulatory guidance and staff review plans. The planned work products will aim to provide the necessary information and tools needed for the NRC to review technical submittals related to fuel cycle technologies associated with non-LWRs.
Planned Activities	Proposed tasks include assessing technical information needs and regulatory considerations for high-assay low-enriched uranium fuel transportation activities, and assessment of molten salt reactor fuel types and associated waste management activities. This research activity will also support coordination activities with the Department of Energy on topics relating to fuel cycle technologies associated with non-LWRs.
Requesting Business Line	New Reactors
Estimated Completion	FY 2025
Estimate of Total Research Resources	2.8 FTE and $800K over a 3.5-year period

Advanced Manufacturing Technologies (NRR-2022-016)	
Importance to the NRC Mission	The purpose of this work is to continue the assessment of new advanced manufacturing technologies (AMTs) with a focus on key topics that have a significant impact on component performance. It also identifies and addresses AMT characteristics pertinent to safety, from a risk-informed and performance-based perspective, that are not currently addressed in codes, standards, or regulations. This work will also help prepare the NRC to address the expanded use of data and modeling to support qualification of new materials and AMTs, particularly the use of in-process non-destructive examination.
Planned Activities	This research project has three primary approaches to prepare the NRC for reviewing AMT applications and AMT-fabricated components: technical preparedness, regulatory preparedness, and communications and knowledge management. Planned activities will develop technical information and knowledge of AMTs, support development of regulatory guidance and tools for efficient and effective reviews, and integrate information from external organizations into the NRC knowledge base for informed decision-making while encouraging knowledge sharing.
Requesting Business Line	Operating Reactors
Estimated Completion	FY 2025
Estimate of Total Research Resources	10 FTE and $2.4M over a 3.5-year period

Harvesting and Aging Management Research Supporting Long-Term Operation (NRR-2022-010)	
Importance to the NRC Mission	The purpose of this work is to identify and address uncertainties and knowledge gaps in existing data and technical bases associated with managing age-related degradation during long-term operation of nuclear power plants. This work will develop, maintain, and implement research strategies to obtain and evaluate domestic and international operating experience on age-related degradation, engage with external stakeholders through workshops and other interactions to collaborate and exchange information, and leverage resources with external stakeholders.
Planned Activities	The planned activities include developing a research strategy for long-term operation focused on materials aging relevant to operation beyond 80 years and updating and implementing the NRC strategy for harvesting aged components from shutdown plants, which provide valuable data on realistic aging conditions in order to confirm that current aging management approaches for long-term operation are appropriate. In support of long-term operation and harvesting, RES will also organize or support external-organized workshops related to long-term operation and harvesting, provide technical support for the update to subsequent license renewal guidance documents, and perform related knowledge management activities.
Requesting Business Line	Operating Reactors
Estimated Completion	FY 2025
Estimate of Total Research Resources	6 FTE and $250K over a 4-year period

Irradiation-Assisted Degradation of Reactor Pressure Vessel Internals from Long-Term Operation (NRR-2022-011)	
Importance to the NRC Mission	This work builds on the activities described in the completed projects section below for NRR-2020-005. The work request reflects current priorities for research on aging effects and mechanisms related to irradiation-assisted degradation that come from long-term operation for light-water reactor vessel internal components. To the extent possible, these projects involve collaboration with external organizations to maximize the effectiveness of limited NRC resources. This research supports regulatory decision-making, including confirming the adequacy of reactor vessel internal aging management strategies, supporting the evaluation of industry submittals for regulatory review, and helping to identify and mitigate future unforeseen significant degradation of reactor vessel internal components due to irradiation-assisted degradation.
Planned Activities	Planned research projects include irradiation-assisted stress corrosion crack growth rate studies and mechanical property testing (e.g., tensile, fracture toughness, and crack initiation testing), and microstructural characterization of irradiated reactor vessel internal materials. Under the prior request, research focused on materials harvested from Zorita were largely completed. Moving forward, specific tasks include irradiated stainless steel weld testing; participation in Organisation for Economic Co-operation and Development / Nuclear Energy Agency cooperative research programs, including Studsvik Materials Integrity for Life Extension and Framework for Irradiation Experiments; additional harvesting and testing of irradiated reactor internals; knowledge gathering and technical support for emergent regulatory needs; and continued monitoring of research by industry and others in this important area.
Requesting Business Line	Operating Reactors
Estimated Completion	FY 2026
Estimate of Total Research Resources	11 FTE and $3.6M over a 3.5-year period

Summary of Completed Research Projects[56]

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

Technical Assistance for Emergency Preparedness Rulemaking Activities and Guidance (NSIR-2017-002)	
Importance to the NRC Mission	The Office of Nuclear Security and Incident Response (NSIR) requested research to (1) evaluate dose assessment methodology for emergency planning zone sizes, (2) develop guidance for performing spent fuel assembly heatup calculations, (3) evaluate non-radiological health effects of evacuations and relocations, and (4) complete computer code modeling improvements and recommend changes to protective action guidelines.
Research Results or Findings	RES successfully completed 10 deliverables, including one NUREG, documenting the results of the work. These deliverables inform the regulatory decisions for the emergency preparedness rulemaking activities and guidance for small modular reactors and other new technologies. Additionally, NSIR used the insights and knowledge gained through RES assistance to support the decommissioning rulemaking and a calculational approach to the heatup of spent fuel to support development of the proposed rule. The tasks provided the technical basis to improve emergency preparedness rulemaking activities and guidance documents.
Duration of the Project	5 years
Estimate of Total Research Resources	4.6 FTE and $1.15M over the 5-year period

Irradiation-Assisted Degradation of Reactor Pressure Vessel Internals from Long-Term Operation (NRR-2020-005)	
Importance to the NRC Mission	This activity performed research on aging effects and mechanisms related to irradiation-assisted degradation that comes from long-term operation for light-water reactor vessel internal components. The research supported regulatory decision-making, including confirming the adequacy of reactor vessel internal aging management strategies, supported the evaluation of industry submittals for regulatory review, and helped to identify and mitigate future unforeseen significant degradation of reactor vessel internal components due to irradiation-assisted degradation. This research activity largely completed testing and analysis of materials harvested from the Zorita reactor and led to the identification of new opportunities to support harvesting and analysis of decommissioned reactors materials.
Research Results or Findings	RES successfully completed 6 deliverables, including three technical letter reports and one Research Information Letter (RIL), documenting the results of the work. These deliverables, including analysis of Zorita reactor internals testing, informed NRC regulatory decisions for the aging management of reactor vessel internal components. Key results from this

[56] 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.

	research are summarized in RIL 2022-05 (ADAMS Accession No. ML22132A039) and focus on high fluence stainless steel plate cracking, lower fluence stainless steel weld fracture toughness, and void swelling. Additionally, this work informed the research plans and activities for the Studsvik Materials Integrity for Life Extension activities discussed in the new project above.
Duration of the Project	2 years
Estimate of Total Research Resources	3.0 FTE and $2.0M over the 2-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.[57]

Fee Class	FY 2022 Part 170 Receipts Proposed – Annual Fee Rule ($M)	Part 170 Billed in Q3 FY 2022 ($M)	Total Part 170 – Billed in FY 2022 ($M)
Fuel Facilities	$7.8	$2.0	$6.2
Generic Decommissioning	$0.7	$0.8	$2.3
Materials Users[58]	$0.9	$0.3	$0.9
Operating Power Reactors	$160.0	$38.8	$120.3
Research and Test Reactors	$5.8	$2.1	$3.4
Spent Fuel Storage / Reactor Decommissioning	$10.3	$2.9	$9.7
Rare Earth	$0.1	$0	$0
Transportation	$2.8	$0.9	$2.5
Uranium Recovery[59]	$0.5	$0.1	$0.5

Significant Ongoing Licensing Actions

The following table includes a comparison of the fees billed to projected resources for subsequent license renewal application reviews, the SHINE Medical Technologies, LLC (SHINE) operating license application review, and the Kairos Hermes construction permit application review.

[57] The FY 2022 Final Fee Rule was published on June 22, 2022 (87 FR 37197).
[58] Materials Users—Billed as flat fee applications and included in the estimates and billed.
[59] The total Part 170 fees billed in FY 2022 for the Uranium Recovery fee class was erroneously reported as $0.2M instead of $0.4M in the previous report.

Docket	Project Name	Projected Resources ($M)[60]	Fees Billed to Date ($M)[61]
Point Beach Units 1 and 2 05000266/05000301	Point Beach Units 1 and 2 Subsequent License Renewal Application — Safety Review	$5.0[62]	$3.4
Point Beach Units 1 and 2 05000266/05000301	Point Beach Units 1 and 2 Subsequent License Renewal Application — Environmental Review	$1.4	$1.3
North Anna Units 1 and 2 05000338/05000339	North Anna Units 1 and 2 Subsequent License Renewal Application — Safety Review	$5.0[63]	$3.0
North Anna Units 1 and 2 05000338/05000339	North Anna Units 1 and 2 Subsequent License Renewal Application — Environmental Review	$1.4	$1.5
Oconee Units 1, 2, and 3 05000269/05000270/ 05000287	Oconee Units 1, 2, and 3 Subsequent License Renewal Application — Safety Review	$5.0[64]	$3.0
Oconee Units 1, 2, and 3 05000269/05000270/ 05000287	Oconee Units 1, 2, and 3 Subsequent License Renewal Application — Environmental Review	$1.4	$0.7
SHINE Medical Technologies, LLC 05000608	SHINE Medical Isotope Production Facility Operating License Application Review — Safety and Environmental Reviews	$6.2[65]	$6.7
St. Lucie Units 1 and 2 05000335/05000389	St. Lucie Units 1 and 2 Subsequent License Renewal Application — Safety Review	$5.0[66]	$2.2

[60] 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.

[61] 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 April, May, and June would be invoiced to the licensee/applicant in July. Therefore, the total billed amounts listed in Table 3-5 reflects costs for NRC work performed through March 2022.

[62] When the formal acceptance letter for the Point Beach subsequent license renewal application was sent to the licensee on January 15, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21006A417), the NRC estimated that it would take approximately $6.4M to complete the application review.

[63] When the formal acceptance letter for the North Anna subsequent license renewal application was sent to the licensee on October 13, 2020 (ADAMS Accession No. ML20258A284), the NRC estimated that it would take approximately $6.4M to complete the application review.

[64] When the formal acceptance letter for the Oconee subsequent license renewal application was sent to the licensee on July 22, 2021 (ADAMS Accession No. ML21194A245), the NRC estimated that it would take approximately $6.4M to complete the application review.

[65] The projected resource estimate was provided to SHINE by letter dated April 30, 2020 (ADAMS Accession No. ML20114E315).

[66] When the formal acceptance letter for the St. Lucie subsequent license renewal application was sent to the licensee on September 24, 2021 (ADAMS Accession No. ML21246A091), the NRC estimated that it would take approximately $6.4M to complete the application review.

Docket	Project Name	Projected Resources ($M)[60]	Fees Billed to Date ($M)[61]
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 05007513	Kairos Hermes – Construction Permit – Safety and Environmental Reviews	$5.5[67]	$1.3

3-6 Requests for Additional Information

The table below provides information on requests for additional information (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.

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[68]
Operating Reactors	396	197	133	44
Non-Power Production and Utilization Facilities[69]	463	13	13	0
Design Certifications for New Reactors[70]	N/A	N/A	N/A	N/A
Early Site Permits for New Reactors[71]	N/A	N/A	N/A	N/A
Combined Licenses for New Reactors	0	0	0	0

[67] The projected resource estimate was provided to Kairos Power LLC by letter dated December 15, 2021 (ADAMS Accession No. ML21343A214).

[68] 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.

[69] 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 10 CFR Part 50, including the ongoing review of the SHINE operating license application.

[70] 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.

[71] 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.

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[68]
Construction Permits for New Reactors or Non-Power Production and Utilization Facilities	0	0	0	0
Fuel Facilities	46	30	10	9
Power Reactor Decommissioning	54	13	16	16
Research and Test Reactor Decommissioning	0	0	0	0
Spent Fuel	763	97	20	54
Materials	0	0	0	0
Pre-Application Activities for Advanced Reactors	5	0	0	0

3-7 Workforce Development and Management

FY 2022 Staffing by Office[72]

	FY 2022 Budget[73]	FTE Utilization 03/13/22 - 04/23/22	FTE Utilization 04/24/22 - 05/21/22	FTE Utilization 05/22/22 - 06/18/22	FTE Utilization as of 06/18/22	Delta (Q3 FTE Utilization – FY 2022 Budget)	End of Year (EOY)[74] Projection w/ Personnel Actions	Delta (EOY Projection – FY 2022 Budget)
Totals	2889.9	205.0	204.4	208.9	1965.5	-924.4	2702.3	-187.6
COMM	42.0	1.8	1.8	1.8	16.8	-25.2	23.6	-18.4
OIG	63.5	4.6	4.5	4.7	43.4	-20.1	59.3	-4.2
Totals Other Offices	2784.4	198.7	198.1	202.4	1905.3	-879.1	2619.5	-164.9
OCFO	92.0	6.9	6.7	6.9	64.5	-27.5	88.7	-3.3
OGC	90.7	7.1	7.0	7.3	68.7	-22.0	94.1	3.4
OCA	10.0	0.8	0.8	0.8	7.5	-2.5	10.2	0.2
OCAA	7.0	0.4	0.4	0.4	4.4	-2.6	5.7	-1.3
OPA	13.0	1.0	1.0	1.0	9.5	-3.5	13.0	0.0
SECY	17.0	1.2	1.2	1.3	11.9	-5.1	16.6	-0.4

[72] Some numbers might not add due to rounding.
[73] Staffing numbers were adjusted slightly during this reporting period from the last report to reflect the enacted budget.
[74] Based on FTE utilization as of June 18, 2022.

	FY 2022 Budget[73]	FTE Utilization 03/13/22 - 04/23/22	FTE Utilization 04/24/22 - 05/21/22	FTE Utilization 05/22/22 - 06/18/22	FTE Utilization as of 06/18/22	Delta (Q3 FTE Utilization – FY 2022 Budget)	End of Year (EOY)[74] Projection w/ Personnel Actions	Delta (EOY Projection – FY 2022 Budget)
OIP	34.0	2.6	2.6	2.6	24.0	-10.0	32.9	-1.1
ASLBP	23.0	1.5	1.5	1.5	14.4	-8.6	19.8	-3.2
ACRS	23.5	1.8	1.9	1.7	17.0	-6.5	22.8	-0.7
OEDO	26.0	2.0	2.1	2.0	19.1	-6.9	26.0	0.0
NRR	565.6	38.6	38.4	39.5	374.0	-191.6	512.8	-52.8
NMSS	302.2	21.7	21.6	22.4	211.2	-91.0	290.2	-12.0
RES	202.7	14.3	14.2	15.1	138.3	-64.4	189.9	-12.8
NSIR	159.3	10.7	10.9	11.2	104.5	-54.8	144.5	-14.8
R-I	171.2	12.5	12.3	12.3	119.7	-51.5	164.0	-7.2
R-II	208.0	15.4	15.5	15.9	144.0	-64.0	200.5	-7.5
R-III	170.7	12.9	12.7	13.2	121.3	-49.4	168.6	-2.1
R-IV	160.9	12.5	12.6	12.9	121.5	-39.4	166.4	5.5
OE	31.5	2.2	2.2	2.2	21.5	-10.0	29.2	-2.3
OI	35.0	2.5	2.4	2.4	24.0	-11.0	32.4	-2.6
OCIO	169.0	11.4	11.5	12.0	107.3	-61.7	149.6	-19.4
ADM	119.1	8.9	8.8	9.1	83.8	-35.3	114.0	-5.1
SBCR	13.0	1.0	1.0	1.0	9.5	-3.5	13.0	0.0
OCHCO	137.0	8.6	8.7	7.8	82.3	-54.7	112.9	-24.1
CSU	3.0	0.2	0.1	0.1	1.4	-1.6	1.7	-1.3

3-8 Inspection Activities

The table below shows the average number of hours of direct inspection per plant in CY 2022.

Average Reactor Oversight Process Direct Inspection Hours

Nationwide Per Plant (unit)	Column 1 of ROP Action Matrix	Column 2 of ROP Action Matrix	Column 3 of ROP Action Matrix	Column 4 of ROP Action Matrix
816 Hours	803 Hours	1411 Hours[75]	No Plants in Column 3	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 2021 (Hours)	CY 2022 (Hours)
i.	Baseline Inspection	230,383	107,331
ii.	Plant-Specific Inspection	4,854	5,125
iii.	Generic Safety Issue Inspections	2,426	83
iv.	Performance Assessment	3,530	2,423

[75] Callaway Plant was in Column 2 of the ROP Action Matrix (ROP Action Matrix) in Q1 FY 2022, and moved to Column 1 on May 6, 2022 (ADAMS Accession No. ML22123A227). Davis-Besse Nuclear Power Station, Unit 1 was in Column 2 in Q1 and Q2 FY 2022 (ADAMS Accession No. ML22055B117).

Items	Description	CY 2021 (Hours)	CY 2022 (Hours)
v.	Other Activities	93,068	48,312
vi.	Total Staff Effort	334,261	163,274
vii.	Total Staff Effort Per Operating Site	5,969.[76]	2,969.[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.

[76] Total staff effort is divided by 56 sites for CY 2021, due to Duane Arnold Unit 1 permanently ceasing operations in August 2020.
[77] Total staff effort is divided by 55 sites for CY 2022, due to Indian Point Unit 3 permanently ceasing operations in April 2021.