POLICY ISSUE
(Information)

November 30, 2021 SECY-21-0100

FOR: The Commissioners

FROM: John W. Lubinski, Director
Office of Nuclear Material Safety and Safeguards

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Date: 2021.11.30 16:12:24 -05'00'

SUBJECT: STATUS OF THE DECOMMISSIONING PROGRAM – 2021 ANNUAL REPORT

PURPOSE:

To provide the U.S. Nuclear Regulatory Commission (NRC) staff's 2021 Annual Report on the Status of the Decommissioning Program, key decommissioning accomplishments in Fiscal Year (FY) 2021 and expected activities for FY 2022. This paper does not address any new commitments or resource implications.

BACKGROUND:

Since 2008, and consistent with Staff Requirements Memorandum (SRM)-COMSECY-08-0036, "Status of Decommissioning Program - 2008 Annual Report," dated January 8, 2009 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML090080223), the staff has provided the Commission with an annual report on decommissioning.

The enclosed 2021 Annual Report on the Status of the Decommissioning Program (Enclosure 1) provides a summary of the NRC's decommissioning program. The report summarizes the status of sites undergoing decommissioning, including the decommissioning of

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power reactors, research and test reactors, complex materials sites, uranium recovery facilities, and fuel cycle facilities. The report also provides key decommissioning accomplishments in FY 2021 and informs the Commission of expected activities for FY 2022.

Since 2002, the NRC staff has provided an annual update to the Commission regarding the status of sites with inadequate financial assurance, as discussed in SECY-02-0079 "Financial Analysis and Recommendations to Facilitate Remediation of Decommissioning Sites in Non-Agreement States" (ADAMS Accession No. ML020950118) and approved by the Commission in the subsequent SRM (ADAMS Accession No. ML022940653). In FY 2017, the NRC staff began providing this information to the Commission as an enclosure to this report, as discussed in SECY-16-0126, "2016 Annual Update: Progress and Future Plans for Decommissioning Sites with Inadequate Financial Assurance" (ADAMS Accession No. ML16257A529). Enclosure 2 of this paper provides an update and contains sensitive internal information and is being withheld from public disclosure.

DISCUSSION:

Status Update for Fiscal Year 2021

As of September 30, 2021, 26 nuclear power and early demonstration reactors, 4 research and test reactors, 9 complex materials facilities[1], 5 uranium recovery facilities, and part of 1 fuel cycle facility are undergoing decommissioning or are in long-term safe storage under NRC jurisdiction.

Of the 26 power and early demonstration reactors in decommissioning, 10 have elected the SAFSTOR (long-term storage) option and 16 have elected the DECON (active decommissioning) option. The inventory of decommissioning power reactor sites increased in 2021 as Duane Arnold and Indian Point Unit 3 permanently ceased power operations. Licensees for three additional reactors have announced their intent to shut down by 2025: Palisades (2022), and Diablo Canyon Units 1 and 2 (2024 and 2025, respectively).

In addition, 19 of the 22 Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) Title I[2] legacy uranium recovery sites and 6 UMTRCA Title II sites are under general license with the U.S. Department of Energy (DOE). Further, there are two additional former uranium mill sites, as well as the Moab, Utah, uranium mill site, that are currently undergoing decommissioning by DOE, and are not under a general license by DOE but have been designated as Title I sites by Congress. Thus, there are 22 Title I sites in total.

In response to the Coronavirus Disease 2019 pandemic (COVID-19), the NRC took several steps to ensure that licensees at sites undergoing decommissioning maintained a safe work environment, while providing relief from certain regulatory requirements.

[1] Complex materials sites are defined as sites where the complexity of the decommissioning process will require more than minimal technical and administrative support.
[2] "Title I" in this report refers to facilities under the UMTRCA of 1978, as amended, that were inactive, unregulated processing sites when the act was passed, while "Title II" refers to facilities that were licensed by the NRC or an Agreement State in 1978 or after UMTRCA was enacted.

In May 2021, the NRC issued an exemption to Oyster Creek Nuclear Generating Station regarding certain requirements in Title 10 of the *Code of Federal Regulations* Part 73 Appendix B. Additional information can be found at https://www.nrc.gov/about-nrc/covid-19/materials/decommissioning.html.

In addition, in FY 2021 Regional decommissioning inspectors continued to use a combination of remote and on-site means to conduct inspections in response to the COVID-19 pandemic. Regional staff coordinated with licensee representatives to perform inspections and communicate via remote means when warranted. The staff reviewed procedures and records via remote means (electronic access) in an effort to minimize their time on-site rather than meeting face-to-face with licensee staff. The staff conducted interviews with licensee staff via remote means such as Microsoft TEAMS or WebEx. The staff conducted inspection activities by leveraging technology (cell phones and tablets) to observe certain evolutions and activities (when possible) and maximizing technology to communicate and hold meetings. When physical restrictions were relaxed, onsite inspections resumed, and the inspectors observed strict personal protective equipment protocols and maximized social distancing as required by each licensee. These efforts continued to meet mission objectives and maintain safety while providing efficiencies in travel and inspection hours resulting in time and labor savings.

Staff also reviewed and concurred on the deferral of groundwater monitoring at the Shiprock, Monument Valley and Tuba City sites due to the COVID-19 pandemic, after determining that the deferral would not impact the health and safety at the sites.

In FY 2021, the NRC staff continued to make progress at sites undergoing decommissioning. Of note, the NRC staff completed the following actions:

In January 2021, NRC staff issued revised Inspection Manual Chapter 2561, to provide updated inspection guidance for the reactor decommissioning program. The updates focused on inspectors' efforts to risk inform the oversight process, incorporate support from subject matter experts in certain areas (i.e., financial assurance, and fire protection), consider remote inspection of certain activities (i.e., document reviews and interviews), delete old references and better integrate the inspection procedures.

In February 2021, decommissioning activities were completed at the United Nuclear Corporation (UNC) site in Connecticut, the last formerly licensed non-Agreement State site in the Terminated License Review Project and the site was released for unrestricted use.

Also, in February 2021, the NRC staff, in conjunction with the Navajo Nation, the U.S. Environmental Protection Agency (EPA), DOE, Department of Interior's Bureau of Indian Affairs, Indian Health Service, and the Agency for Toxic Substances and Disease Registry completed a multi-year effort to develop a new 10-year plan to address uranium contamination on the Navajo Nation.

In April 2021, the NRC staff completed its review of Colorado's Completion Review Report (CRR) for the Durita site and in August 2021, the NRC staff completed the review of Wyoming's CRR for the Western Nuclear Incorporated (WNI) site.

In May 2021 NRC staff approved the license transfer of Three Mile Island Unit 2 (TMI-2) to TMI-2 Solutions, LLC to allow for the accelerated decommissioning of the damaged reactor and a license amendment to transfer Indian Point Units 1, 2 and 3 to Holtec Decommissioning International.

In September 2020, the NRC staff issued the Safety Evaluation Report for the license amendment request for the UNC Church Rock, New Mexico site to construct a disposal cell for mine spoils atop the existing mill tailings cell. The NRC will issue the revised final SER in late Spring 2022, based on comments from the DOE and the licensee. The Draft Environmental Impact Statement (EIS) was issued for public comment in November 2020. At the request of stakeholders, the comment period was extended to November 1, 2021. During the extended comment period, NRC staff have engaged in outreach with the Navajo Nation, which have included but were not limited to virtual meetings, newspaper, and radio broadcasts. The Final EIS is now scheduled for May 2022. The staff expects to complete the concurrence process with the appropriate Federal and State entities and issue the amendment in June 2022.

In FY 2021, staff continued the review of the Final Status Surveys for Humboldt Bay, LaCrosse and Zion Unit 1 and Unit 2.

In FY 2021, the NRC and the National Park Service (NPS) continued to coordinate efforts, in accordance with the NRC/NPS Memorandum of Understanding (MOU), for the ongoing environmental response actions at Great Kills Park in Staten Island, New York; Spring Creek Park in Queens, New York; and Dead Horse Bay in Brooklyn, New York, that NPS previously identified with confirmed radium contamination.

Activities in Fiscal Year 2022 and Beyond

In FY 2022 the staff will continue to work toward the termination of licenses at sites where physical decommissioning has been completed, such as Humboldt Bay, Zion Units 1 and 2, and La Crosse and will terminate the General Atomics TRIGA[3] reactor licenses.

In FY 2022, the NRC staff intends to continue to make progress in the decommissioning of complex materials sites, including the termination of the Sigma-Aldrich license. The staff will also continue to work with the Oklahoma Department of Environmental Quality to evaluate funding options for the decommissioning of the Fansteel Metals (formerly FMRI) site and work with the EPA to determine if the site is eligible for cleanup under the Comprehensive Environmental Response Compensation and Liability Act. The staff will continue its review the new work plans for the Shallow Land Disposal area.

The NRC staff intends to continue implementing the MOU with the Department of Defense for military radium by prioritizing its activities based on available resources. Factors for consideration in prioritizing annual monitoring activities include: (1) involvement of other regulatory agencies; (2) use of engineered controls and/or land use controls as remedies; (3) contamination in buildings for reuse; (4) amount or type of material and how transportable it is; and (5) previous monitoring activities.

[3] Training, Research, Isotopes, General Atomics (TRIGA)

The NRC staff plans to continue its efforts on non-military radium by working with site owners on risk-informed approaches for site cleanup. Additionally, the NRC staff will continue to implement the MOU with NPS as remediation activities progress at the parks.

The NRC staff will continue its participation in the activities associated with the Navajo Nation 10-year plan and the DOE/Navajo Nation/Hopi quarterly meetings. Additionally, the staff will review DOE reports and plans for the reclamation and management of these sites. The staff will continue its review of the UNC Church Rock license amendment request and the reviews of the Groundwater Corrective Action Plans for the Gunnison and Rifle sites in Colorado and the Green River site in Utah. The NRC staff expects that the Homestake site in New Mexico will submit an application for a final radon barrier redesign incorporating an evapotranspiration cover for the top of the large tailings pile, as well as an application for a groundwater alternate concentration limit. When submitted, NRC staff will review these applications.

The staff will continue to work with DOE to resolve issues associated with the Bluewater site and will work with Wyoming to explore and implement options for decommissioning the American Nuclear Corporation site. The staff will also work with DOE to complete the reviews of the Long-term Surveillance Plans for the WNI and Durita sites and Texas to complete the review of the CRR for the Panna Maria site.

CONCLUSION:

In FY 2021, the NRC staff made progress toward the completion of decommissioning of several sites. The NRC public Web site contains status summaries for the facilities managed in the Decommissioning Program (https://www.nrc.gov/waste/decommissioning.html). These summaries, which are updated annually or when significant changes in status occur, describe the status of each site and identify the major technical and regulatory issues affecting the completion of decommissioning.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections.

Enclosures:
1. Status of the Decommissioning Program - 2021 Annual Report
2. 2021 Annual Update on Decommissioning Sites with Financial Assurance Issues (non-public)

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