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NUCLEAR REGULATORY COMMISSION

[Docket No. 50-238; NRC-2024-0207]

United States Department of Transportation Maritime Administration;

Nuclear Ship Savannah; Environmental Assessment and Finding of No Significant Impact

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering a license amendment request to approve the License Termination Plan (LTP) of License No. NS-1 for the Nuclear Ship Savannah (NSS) located at Pier 13, Canton Marine Terminal, in Baltimore, Maryland. If approved, the amendment would add a condition to the NSS license reflecting the NRC's approval of the LTP and establishing criteria for determining when changes to the LTP require prior NRC approval. The NRC staff has prepared an environmental assessment (EA) for this proposed license amendment in accordance with NRC regulations. Based on the EA, the NRC has concluded that a finding of no significant impact (FONSI) is appropriate. Therefore, in accordance with NRC regulations, preparation of an environmental impact statement (EIS) is not warranted for the proposed action. The NRC staff also is conducting a safety evaluation of the proposed license amendment.

DATES: The EA and FONSI referenced in this document are available on **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Please refer to Docket ID **NRC-2024-0207** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2024-0207**. Address questions about Docket IDs to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical

questions, contact the individual listed in the “For Further Information Contact” section of this document.

- **NRC's Agencywide Documents Access and Management System**

(ADAMS): You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the “Availability of Documents” section.

- **NRC's PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Diana Diaz Toro, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-0930, email: Diana.Diaz-Toro@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC is considering issuance of a license amendment request to approve the LTP for NSS, located at Pier 13, Canton Marine Terminal, in Baltimore, Maryland, as part of the United States Department of Transportation Maritime Administration’s (MARAD) part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), “Domestic Licensing of Production and Utilization Facilities,” License No. NS-1. If granted, the license amendment would add a condition to the NSS license reflecting the NRC’s approval of MARAD’s LTP and establishing criteria for determining when changes to the LTP require prior NRC approval. As required by 10 CFR part 51, “Environmental

Protection Regulations for Domestic Licensing and Related Regulatory Functions,” the NRC staff prepared an EA.

Based on the EA, the NRC staff has determined that an EIS is not required for this proposed action and a FONSI is appropriate. The NRC staff is also conducting a safety evaluation of the proposed license renewal request pursuant to 10 CFR part 50 and the results will be documented in a separate safety evaluation report.

II. Summary of Environmental Assessment

Description of the Proposed Action

The proposed action is the review and approval, if appropriate, of MARAD's LTP for NSS located in Pier 13, Canton Marine Terminal, in Baltimore, Maryland. If approved by the NRC, the NSS license will be amended by adding a license condition that documents approval of the LTP and stipulating the changes that MARAD can make to the LTP without prior NRC approval. If the NRC approves the LTP, MARAD would implement the LTP to complete NSS decommissioning activities. Once decommissioning is complete, MARAD plans to submit a request to the NRC to terminate the license.

Purpose and Need for the Proposed Action

The purpose and need for the proposed action is to authorize MARAD to complete decommissioning of NSS to meet the unrestricted use criteria as specified in 10 CFR 20.1402, “Radiological criteria for unrestricted use.” If the NRC approves the LTP, MARAD would complete decommissioning of NSS, followed by a request to terminate the NSS license. Upon NRC's termination of the license, MARAD would proceed to disposition the ship (e.g., preservation, shipbreaking, or artificial reefing) consistent with the process established in the Programmatic Agreement (PA) executed in accordance with the National Historic Preservation Act (NHPA).

Environmental Impacts of the Proposed Action

The NRC staff has assessed the potential environmental impacts of the proposed action. The results of the NRC's environmental review can be found in the EA. The NRC staff performed its environmental review in accordance with the requirements in

10 CFR part 51. The NRC staff relied on the NRC's NUREG-0586, Supplement 1, "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" (Decommissioning GEIS), as appropriate. In the Decommissioning GEIS, the NRC previously evaluated the potential environmental impacts of nuclear reactor decommissioning from the time that a licensee certifies it has permanently ceased power operations until the license is terminated. While NSS is not a nuclear power plant in the traditional sense, the ship was powered by an 80-megawatt thermal (MW_{th}) pressurized water reactor (PWR). Therefore, some of the analyses and conclusions in the Decommissioning GEIS are applicable to the decommissioning of the ship.

NSS ceased operations in 1970 and the 80 MW_{th} PWR was defueled in 1971. In 1972, the spent fuel elements were shipped to the U.S. Department of Energy's Savannah River Site in Aiken, South Carolina. In 1976 the NRC license was changed to a possession-only license.

The ship was operated as a museum from 1981 to 1994 at the Patriots Point Naval and Maritime Museum in Mount Pleasant, South Carolina. In 1983, the ship was listed in the National Register of Historic Places and in 1991 it was designated as a National Historic Landmark for exhibiting exceptional value in illustrating the nuclear, maritime, transportation, and political heritages of the United States. The ship was moved to Baltimore, Maryland in 2008.

The license boundary for NSS is defined as the hull of the ship, therefore everything outside of the ship itself is considered off-site area. The site contains no soils or groundwater. There are no residences within 1.6 kilometers (km) (1 mile [mi]), however, NSS is berthed within the Port of Baltimore, a large industrial facility supporting over 15,000 direct jobs. There are two communities within 3.2 km (2 mi) of NSS with residences, medical facilities, schools, and parks. There are no nearby off-site wells or potable water sources.

Because MARAD's decommissioning, license termination, and final disposition involve dismantlement and remediation activities, including removal of some systems,

structures, and components of the ship's nuclear power plant, MARAD determined that these activities would have an adverse effect per 36 CFR 800, "Protection of Historic Properties." In March 2023, MARAD executed a PA to minimize harm to landmarks, to the maximum extent possible, consistent with under section 110(f) of the NHPA. The purpose of the PA is to facilitate preservation of NSS during decommissioning. The PA was signed by Advisory Council on Historic Preservation, the NRC, and the Maryland State Historic Preservation Officer. The NRC is a signatory to the PA and, accordingly, has satisfied its obligations under the NHPA. The PA includes several concurring parties, including the National Park Service, Smithsonian Institution, on behalf of the National Museum of American History, the Steamship Historical Society of America, the N/S Savannah Association, the National Museum of Nuclear Science and History, and the Health Physics Society.

As part of the license termination plan, the ship itself would not be dismantled, and license termination activities would be conducted, to the greatest extent practicable, within the ship's license site boundary (e.g., onboard the ship). To minimize impacts to adjacent facilities and the environment and to avoid changes to the license boundary, MARAD separates and packages waste onboard NSS for subsequent transport of the waste for disposal at a permitted facility.

Chapter 3 of the LTP describes the activities that MARAD has completed as well as the remaining decommissioning activities. MARAD has dismantled the reactor auxiliary systems and components outside of the reactor compartment and disposed of it as low-level radiological waste (LLRW) in 2022. MARAD has completed the removal of major components including the control rod drive tower, port and starboard steam generator tubes and tube sheets, and the reactor pressure vessel head and internal components. In 2023, MARAD removed the lower section of the pressurizer and shipped it offsite as LLRW. MARAD plans to retain the remaining portions of the pressurizer as well as the containment vessel and secondary shield. Primary ship structures such as the decks, bulkheads, and contaminated liquid storage tanks will be decontaminated and

remediated to meet the criteria for unrestricted use. After decontamination, the final status survey will be performed to verify that residual radioactivity has been reduced to meet the radiological criteria for unrestricted use in 10 CFR 20.1402.

The license termination activities would not impact the water quality of the port where the ship is moored as all waste is handled onsite to avoid impacting adjacent lands and water quality. Compliance with all Federal, State, and local permits pertaining to water quality throughout decommissioning activities ensures that surface water impacts are either minimal or evaluated in an appropriate environmental review. During current ship operations, anticipated discharges would consist of stormwater and condensate from the heating, ventilation and air conditioning system. MARAD has consulted with the Maryland Department of the Environment to ensure all liquid discharges from the ship are within state limits. The Maryland Department of the Environment concluded NSS did not require a permit, thus, MARAD does not have a National Pollutant Discharge Elimination System permit. Wastewater was collected in drums during decommissioning activities and shipped and disposed of offsite.

MARAD has been conducting remediation throughout the decommissioning process based on the results of radiological surveys. Routine radiological surveys along with historical survey data indicate that minimal contamination has been identified to date. MARAD's occupational exposure as of September 30, 2023, is approximately 0.02168 person-Sv (2.168 person-rem) and the estimated exposure from all remaining activities would be approximately 0.02178 person-Sv (2.178 person-rem). MARAD does not anticipate any radioactive releases to unrestricted areas during the remaining decommissioning activities. The non-radiological hazards are typical of decommissioning activities, such as operation of heavy equipment, falling objects, or fires. MARAD would implement operating procedures and safety measures in accordance with Occupational Safety Health Administration regulations. Accordingly, no significant radiological or non-radiological impacts are expected to result from approval of the LTP. Therefore, the NRC staff does not anticipate impacts to public or workers' health and safety from radiological

and non-radiological hazards, air quality, and transportation beyond those discussed in the Decommissioning GEIS, which concluded that the impact level for these issues was SMALL. Additionally, the NRC staff finds that impacts to off-site land use, geology and soils, water quality (surface and groundwater), visual resources, noise, socioeconomics, and waste management would be SMALL and not be significant. As discussed in section 3.8 of the EA, the NRC staff determined that impacts to terrestrial and aquatic ecology from the proposed license termination activities would be SMALL and not significant. Also, there would be no disproportionately high and adverse impacts on minority and low-income populations as a result of license termination activities at NSS.

The NRC staff determined that the proposed action would have no effect on any Federally listed species under the Endangered Species Act (ESA) because no Federally listed species are expected to occur within the action area as the action area does not provide suitable habitat for the listed species. Therefore, the NRC staff concludes that the proposed action would have no effect on any Federally listed, proposed, or candidate species. No critical habitats occur within the action area. Shortnose sturgeons are known to be present in Chesapeake Bay, however, they are unlikely to be present in the vicinity of the ship. Federal agencies are not required to consult with the U.S. Fish and Wildlife Service if they determine that an action will have no effect on Federally listed species or critical habitats. Thus, the ESA does not require consultation on the proposed license termination activities at NSS. The NRC staff considers its obligations under ESA section 7 to be fulfilled for the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action

The NRC staff also assessed the potential environmental impacts of alternatives to the proposed action, including alternative sites and the no-action alternative.

MARAD evaluated the environmental impacts of decommissioning NSS at three different ports: Baltimore, Maryland; Philadelphia, Pennsylvania; and Hampton Roads, Virginia. All three sites are in industrial areas along a deep-water waterfront with restricted access. Decommissioning activities would be similar regardless of the location;

therefore, most of the environmental impacts anticipated at the Philadelphia or Hamptons Roads locations would not be significantly different from the environmental impacts discussed in the EA for the Port of Baltimore. The Port of Baltimore was selected as the location for decommissioning NSS using the DECON method because the ship is currently docked there, therefore selecting any other location would require MARAD to tow the ship to the new location, which could result in additional potential environmental impacts.

The no-action alternative would consist of the NRC's denial of MARAD's LTP. Decommissioning and onsite maintenance activities would continue at the site. MARAD would not be able to request license termination until a revised LTP was submitted and approved by the NRC. Under this scenario, until MARAD resubmits an updated LTP, berthing of NSS at the Port in Baltimore would likely continue, including maintenance activities. Environmental impacts would neither significantly increase nor decrease because of the additional time, except for the costs associated with continuing to maintain the ship in a protective storage condition.

Agencies and Persons Consulted

On August 22, 2024, the NRC staff submitted the draft EA to the State of Maryland for their review and comment. On September 30, 2024, the State of Maryland provided comments regarding: (i) National Ambient Air Quality Standards (NAAQS) designation (attainment/nonattainment status) for the State of Maryland, (ii) air emissions from NAAQS-criteria pollutants, (iii) and coastal effects in accordance with the Coastal Zone Management Act. The NRC staff addressed all comments from the State of Maryland in the final EA.

III. Finding of No Significant Impact

In accordance with the requirements in 10 CFR part 51, the NRC staff has concluded that the proposed action will not significantly affect the quality of the human environment. Therefore, the NRC staff has determined, pursuant to 10 CFR 51.31, "Determinations based on environmental assessment," that preparation of an EIS is not

required for the proposed action, and pursuant to 10 CFR 51.32, "Finding of no significant impact," a FONSI is appropriate. Consistent with 10 CFR 51.32(a)(4), this FONSI incorporates the EA set forth in this notice by reference.

IV. Availability of Documents

The documents identified in the following table are available to interested persons through ADAMS, as indicated.

Document Description	ADAMS Accession No.
MARAD's Docket No. 50-238; License No. NS-1; N.S. Savannah, Submittal of Finding of No Significant Impact and Environmental Assessment, transmitted to NRC on October 3, 2008.	ML082810182
MARAD's Docket No. 50-238; License No. NS-1; N.S. Savannah, Supplemental Environmental Assessment and Finding of No Significant Impact, CR-137, transmitted to NRC on May 21, 2024.	ML24145A128
MARAD's Programmatic Agreement among the U.S. Department of Transportation, Maritime Administration, the U.S. Nuclear Regulatory Commission, the Advisory Council on Historic Preservation, and the Maryland State Historic Preservation Officer for the Decommissioning and Disposition of the Nuclear Ship Savannah, Baltimore, Maryland, dated March 17, 2023.	ML24191A138 (Package)
MARAD's Docket No. 50-238; License No. NS-1; N.S. Savannah, License Amendment Request No. LAR 2023-01. Submittal and Request for Approval of the License Termination Plan, dated October 23, 2023.	ML23298A041
MARAD's Docket No. 50-238; License No. NS-1; N.S. Savannah, License Amendment Request No. LAR 2023-01, Response to Requests for Additional Information, dated June 27, 2024.	ML24183A271
MARAD's Docket No. 50-238; License No. NS-1; N.S. Savannah, License Amendment Request No. LAR 2023-01, Response to Second Request for Additional Information, dated October 16, 2024.	ML24292A030
NRC's NUREG-0586, Supplement 1, "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," dated November 2002	ML023470304, ML023470323, ML023500187, ML023500211, ML023500223
Environmental Assessment for the License Termination Plan for the Nuclear Ship Savannah in Baltimore, Maryland, dated December 2024.	ML24351A024

Dated: December 20, 2024.

For the Nuclear Regulatory Commission.

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