[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 72-1041, 50-498, and 50-499; NRC-2024-0104]

South Texas Project Nuclear Operating Company;

South Texas Project Electric Generating Station, Units 1 and 2;

Independent Spent Fuel Storage Installation;

Environmental Assessment and Finding of No Significant Impact

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing an environmental assessment (EA) and a finding of no significant impact (FONSI) for an exemption request submitted by South Texas Project Nuclear Operating Company (STPNOC) that would permit South Texas Project Electric Generating Station (STP) to shuffle (relocate) 10 loaded and load two new 37 multi-purpose canisters (MPC) with continuous basket shims (CBS) in January and March 2025, respectively, in the HI-STORM Flood/Wind (FW) MPC Storage System at its STP Units 1 and 2 independent spent fuel storage installation (ISFSI) in a storage condition where the terms, conditions, and specifications in the Certificate of Compliance (CoC) No. 1032, Amendment No. 2, are not met.

DATES: The EA and FONSI referenced in this document are available on June 26, 2024.

ADDRESSES: Please refer to Docket ID **NRC-2024-0104** 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-2024-0104**. Address questions about Docket IDs in Regulations.gov 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: Yen-Ju Chen, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone: 301-415-1018; email: Yen-Ju.Chen@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC is reviewing an exemption request from STPNOC, dated May 7, 2024, and supplemented on May 15, 2024. STPNOC is requesting an exemption, pursuant to

section 72.7 of title 10 of the *Code of Federal Regulations* (10 CFR), in paragraphs 72.212(a)(2), 72.212(b)(3), 72.212(b)(5)(i), 72.212(b)(11), and 72.214 that require STPNOC to comply with the terms, conditions, and specifications of CoC No. 1032, Amendment No. 2. If approved, the exemption would allow STPNOC to shuffle (relocate) 10 loaded MPC-37-CBS in the HI-STORM FW MPC Storage System on the ISFSI pad at the STP ISFSI in January 2025, and load two MPC-37-CBS in March 2025 in the HI-STORM FW MPC Storage System at the STP ISFSI in a storage condition where the terms, conditions, and specifications in CoC No. 1032, Amendment No. 2, are not met.

II. Environmental Assessment

Background

STP is located in Bay City, Texas. STP occupies a 12,200-acre site west of the Colorado River and approximately 70 miles southwest of Houston. Unit 1 began operating in 1988 and Unit 2 began operating in 1989. STPNOC has been storing spent nuclear fuel in an ISFSI at STP under a general license as authorized by 10 CFR part 72, subpart K, “General License for Storage of Spent Fuel at Power Reactor Sites.” STPNOC currently uses the HI-STORM FW MPC Storage System under CoC No. 1032, Amendment No. 2, for dry storage of spent nuclear fuel in a specific MPC (i.e., MPC-37) at the STP ISFSI.

Description of the Proposed Action

The CoC is the NRC approved design for each dry cask storage system. The proposed action would exempt the applicant from the requirements of 10 CFR 72.212(a)(2), 72.212(b)(3), 72.212(b)(5)(i), 72.212(b)(11), and 72.214 only as these requirements pertain to the use of the MPC-37-CBS in the HI-STORM FW MPC Storage System for the near-term planned shuffling and loading of the systems. The exemption would allow STPNOC to shuffle (relocate) 10 loaded MPC-37-CBS in the

HI-STORM FW MPC Storage System on the ISFSI pad at the STP ISFSI in January 2025, and load two new MPC-37-CBS in March 2025 in the HI-STORM FW MPC Storage System at the STP ISFSI in a storage condition, despite the MPC-37-CBS in the HI-STORM FW MPC Storage System not being in compliance with the terms, conditions, and specifications in the CoC No. 1032, Amendment No. 2.

The HI-STORM FW MPC Storage System CoC provides the requirements, conditions, and operating limits necessary for the use of the system to store spent fuel. Holtec International (Holtec), the designer and manufacturer of the HI-STORM FW MPC Storage System, developed a variant of the design with CBS for the MPC-37, known as MPC-37-CBS. Holtec originally implemented the CBS variant design under the provisions of 10 CFR 72.48, which allows licensees to make changes to cask designs without a CoC amendment under certain conditions (listed in 10 CFR 72.48(c)). After evaluating the specific changes to the cask designs, the NRC determined that Holtec erred when it implemented the CBS variant design under 10 CFR 72.48, as this was not the type of change allowed without a CoC amendment. For this reason, the NRC issued three Severity Level IV violations to Holtec. STPNOC plans to shuffle (relocate) the 10 loaded MPC-37-CBS canisters on the ISFSI pad in January 2025 and to load two new MPC-37-CBS in the HI-STORM FW MPC Storage System in March 2025. This exemption considers the relocation of the 10 already loaded canisters and the near-term planned loading of the two canisters with the CBS variant basket design.

Need for the Proposed Action

STPNOC requested this exemption in order to allow STP to shuffle (relocate) 10 loaded MPC-37-CBS in the HI-STORM FW MPC Storage System on the ISFSI pad at the STP ISFSI in January 2025, and load two new MPC-37-CBS in the HI-STORM FW MPC Storage System at the STP ISFSI in a storage condition in March 2025.

Approval of the exemption request would allow STPNOC to effectively manage the margin for full core offload in the STP spent nuclear fuel pool to maintain its ability to offload fuel from the reactor and account for unplanned outages and cask storage component fabrication challenges that could drive rescheduling the loading campaign. It would reduce the decay heat removal demand on the spent fuel pool cooling system, and thus reduce the consequence of a design basis accident associated with a loss of spent fuel pool cooling event and the likelihood of a fuel handling accident. Approval of the exemption request would also allow STPNOC to shuffle already loaded MPC-37-CBS canisters, and thus optimize available space on STP ISFSI pad for cask transporter maneuverability and minimize long-term damage to the STP ISFSI pad and personnel radiation exposure from cask transporter use.

Environmental Impacts of the Proposed Action

This EA evaluates the potential environmental impacts of granting an exemption from the terms, conditions, and specifications in CoC No. 1032, Amendment No. 2. The exemption would allow STPNOC to shuffle (relocate) 10 loaded MPC-37-CBS in the HI-STORM FW MPC Storage System on the ISFSI pad at the STP ISFSI in January 2025, and load two new MPC-37-CBS in March 2025 in the HI-STORM FW MPC Storage System at the STP ISFSI in a storage condition.

The potential environmental impacts of storing spent nuclear fuel in NRC-approved storage systems have been documented in previous assessments. On July 18, 1990, the NRC amended 10 CFR part 72 to provide for the storage of spent nuclear fuel under a general license in cask designs approved by the NRC. The EA for the 1990 final rule analyzed the potential environmental impacts of using NRC-approved storage casks. The EA for the HI-STORM FW MPC Storage System, CoC No. 1032, Amendment No. 2, published on August 23, 2016, tiers off of the EA issued for the

July 18, 1990, final rule. “Tiering” off earlier EAs is a standard process encouraged by the regulations implementing the National Environmental Policy Act of 1969 (NEPA) that entails the use of impact analyses of previous EAs to bound the impacts of a proposed action where appropriate. The Holtec HI-STORM FW MPC Storage System is designed to mitigate the effects of design basis accidents that could occur during storage. Considering the specific design requirements for the accident conditions, the design of the cask would prevent loss of containment, shielding, and criticality control. If there is no loss of containment, shielding, or criticality control, the environmental impacts would not be significant.

The exemptions requested by STPNOC at the STP site as they relate to CoC No. 1032, Amendment No. 2, for the HI-STORM FW MPC Storage System are limited to the use of the CBS variant basket design only for shuffling the 10 already loaded canisters and near-term planned loading of two canisters utilizing the CBS variant basket design. The staff has determined that this change in the basket would not result in either radiological or non-radiological environmental impacts that significantly differ from the environmental impacts evaluated in the EA supporting the issuance of CoC No. 1032, Amendment No. 2. If the exemption is granted, there would be no significant change in the types or amounts of any effluents released, no significant increase in individual or cumulative public or occupational radiation exposure, and no significant increase in the potential for or consequences from radiological accidents. Accordingly, the Commission concludes that there would be no significant environmental impacts associated with the proposed action.

Alternative to the Proposed Action

The staff considered the no-action alternative. The no-action alternative (denial of the exemption request) would require STPNOC to keep the spent nuclear fuel in the

spent fuel pool until the approved design canisters can be fabricated and delivered to the site in April 2025 which is after the planned March 2025 loading campaign. Because the March 2025 loading campaign was scheduled, budgeted, and planned several years in advance based on planned refueling outages, new fuel receipts, and other enterprise-level projects while considering the availability of specialty resources (equipment, vendors), any delay would have cascading impacts to future new fuel receipt, refueling outage, and other enterprise projects. Delay beyond 2025, if unable to reschedule in 2025, would result in loading these two canisters during the next scheduled loading campaign in 2028. Then, the number of canisters to be loaded could increase even more based on the new criticality analysis for the spent fuel pools to accommodate the planned use of accident tolerant fuel.

Further, if STPNOC does not shuffle the 10 loaded canisters, this could challenge the cask transporter maneuverability on the STP ISFSI pad, and thus increase the use of a cask transporter on the STP ISFSI pad, which could increase the long-term damage to the STP ISFSI pad and result in likely longer personnel radiation exposure from increased transporter use.

The NRC has determined that these potential impacts of the no-action alternative could be avoided by proceeding with the proposed exemption, especially given that the staff has concluded in NRC's Safety Determination Memorandum, issued with respect to the enforcement action against Holtec regarding these violations, that fuel can be stored safely in the MPC-37-CBS canisters.

Agencies Consulted

The NRC provided the Texas Department of State Health Services (TDSHS) a copy of this draft EA for review by an email dated June 3, 2024. On June 18, 2024, the TDSHS provided its concurrence by email.

III. Finding of No Significant Impact

The environmental impacts of the proposed action have been reviewed in accordance with the requirements in 10 CFR part 51, which implement NEPA. Based upon the foregoing EA, the NRC finds that the proposed action of granting the exemption from the regulations in 10 CFR 72.212(a)(2), 72.212(b)(3), 72.212(b)(5)(i), 72.212(b)(11) and 72.214, which require the licensee to comply with the terms, conditions, and specifications of the CoC, would not significantly impact the quality of the human environment. The exemption in this case would be limited to the shuffling and near-term loading of specific canisters with the CBS variant basket design. Accordingly, the NRC has determined that a FONSI is appropriate, and an environmental impact statement is not warranted.

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. or *Federal Register* notice
STPNOC's request for exemption, dated May 7, 2024.	ML24128A157
Supplement to request for exemption, dated May 15, 2024.	ML24136A284
Certificate of Compliance No. 1032, Amendment 2, dated November 7, 2016.	ML16280A008 (Package)
Holtec International, Inc. – Notice of Violation; The U.S. Nuclear Regulatory Commission Inspection Report No. 07201014/2022-201, EA-23-044, dated January 30, 2024.	ML24016A190
10 CFR part 72 amendment to allow spent fuel storage in NRC-approved casks, dated July 18, 1990.	55 FR 29181
EA for part 72 amendment to allow spent fuel storage in NRC-approved casks, dated March 8, 1989.	ML051230231
Direct Final Rule for List of Approved Spent Fuel Storage Casks: Holtec International HI-STORM Flood/Wind Multipurpose Canister Storage	81 FR 57442

System, Amendment 2, dated August 23, 2016.	
Safety Determination of a Potential Structural Failure of the Fuel Basket During Accident Conditions for the HI-STORM 100 and HI-STORM Flood/Wind Dry Cask Storage Systems, dated January 31, 2024.	ML24018A085
NRC email to TDSHS requesting review of EA/FONSI for STP Exemption, dated June 3, 2024.	ML24170A886
TDSHS email response regarding review of EA/FONSI for TSP Exemption, dated June 18, 2024.	ML24170A887

Dated: June 21, 2024.

For the Nuclear Regulatory Commission.

/RA/

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