U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
DIVISION OF FUEL MANAGEMENT

FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR EXELON GENERATION COMPANY, LLC, INITIAL DECOMMISSIONING FUNDING PLAN SUBMITTED IN ACCORDANCE WITH 10 CFR 72.30(b) AND CONSTELLATION ENERGY GENERATION, LLC, UPDATED DECOMMISSIONING FUNDING PLAN SUBMITTED IN ACCORDANCE WITH 10 CFR 72.30(c), FOR THREE MILE ISLAND UNIT 1 INDEPENDENT SPENT FUEL STORAGE INSTALLATION

DOCKET NO. 72-77
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TABLE OF CONTENTS

1.0 INTRODUCTION

Exelon Generation Company, LLC (EGC), and Constellation Energy Generation, LLC (CEG), submitted decommissioning funding plans (DFPs) for the Three Mile Island Unit 1 (TMI-1) Independent Spent Fuel Storage Installation (ISFSI) to the U.S. Nuclear Regulatory Commission (NRC) for the NRC's review and approval.[1] The NRC prepared this environmental assessment (EA) and its associated finding of no significant impact (FONSI) in accordance with the NRC regulations at Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," that implement the National Environmental Policy Act of 1969 (NEPA), as amended,[2] and the NRC staff guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs." This EA and FONSI document the NRC's compliance with NEPA.

1.1 Background

The NRC regulations at 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste," govern the storage of spent nuclear fuel (spent fuel)[3] generated at commercial nuclear power reactors licensed by the NRC. Spent fuel that has been removed from the reactor's spent fuel pool is typically stored at a nuclear power plant's ISFSI. The applicable NRC regulation defines an ISFSI as "a complex designed and constructed for the interim storage of spent nuclear fuel, solid reactor-related [Greater than Class C] waste, and other radioactive materials associated with spent fuel."[4]

The NRC requires its licensees to plan for the eventual decommissioning of their licensed facilities prior to license termination. The term "decommission" is defined as the removal of "a facility or site safely from service," and the reduction in "residual radioactivity" to a level that permits either an unrestricted or restricted release of the property and termination of the applicable NRC license.[5] An essential element of decommissioning is ensuring that licensees have adequate funds to pay the various decommissioning costs that may arise. Financial assurances are financial arrangements provided by a licensee, whereby funds for decommissioning will be available when needed.

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[1] In response to a Commission order dated November 16, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21277A192), for the indirect transfer of licenses as part of a spin transaction, the NRC amended renewed license no. DPR-50 for TMI-1 on February 1, 2022, changing the licensee from EGC to CEG (ADAMS Accession No. ML22021B662). The change included transferring the general license for the TMI-1 ISFSI from EGC to CEG.

[2] 42 U.S.C. 4321 et seq.

[3] The NRC defines "spent fuel" as "fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least one year's decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing. Spent fuel includes the special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies" (10 CFR 72.3, definition of "Spent Nuclear Fuel or Spent Fuel").

[4] 10 CFR 72.3 (definition of "Independent spent fuel storage installation or ISFSI").

[5] 10 CFR 72.3 (definition of "Decommission"). The NRC's criteria for unrestricted release and restricted release are set forth in 10 CFR 20.1402 and 20.1403, respectively. The NRC defines the term "residual radioactivity" as "radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control" (10 CFR 20.1003, definition of "residual radioactivity").

On June 17, 2011, the NRC published a final rule amending its decommissioning planning regulations (76 *Federal Register* [FR] 35512). The final rule amended the NRC's regulations to improve decommissioning planning and thus, reduced the likelihood that any operating facility would become a legacy site. The statement of considerations for the June 2011 final rule states that a legacy site "is a facility that is decommissioning and has an owner who cannot complete the decommissioning work for technical or financial reasons" (76 FR 35512, 35516). According to the EA (NRC, 2009) that supported the June 2011 rulemaking, "legacy sites have two common characteristics: (1) subsurface residual radioactivity in amounts greater than anticipated and (2) insufficient funds to remediate the radiological contamination to levels that will meet the NRC's decommissioning criteria." The rulemaking EA further stated that "numerous un-remediated minor spills, accumulated over the lifetime of a facility, may lead to unanticipated levels of subsurface contamination that have not been adequately factored into decommissioning costs."

The June 2011 final rule amended the NRC regulation, 10 CFR 72.30, which concerns financial assurance and decommissioning for ISFSIs. This regulation now requires each holder of, or applicant for, a license under 10 CFR Part 72 to submit, for NRC review and approval, a DFP (hereafter, initial DFP). The purpose of the initial DFP is to demonstrate the licensee's financial assurance, *i.e.*, that funds will be available to decommission the ISFSI. Section 72.30(b) requires that the initial DFP contain a detailed decommissioning cost estimate (DCE) in an amount reflecting: (1) the cost of an independent contractor to perform all decommissioning activities, (2) an adequate contingency factor, and (3) the cost of meeting the 10 CFR 20.1402 unrestricted use criteria (or the cost of meeting the 10 CFR 20.1403 restricted use criteria, provided the licensee can demonstrate its ability to meet these criteria). The licensee's initial DFP must also identify and justify using the key assumptions contained in the DCE. Further, the initial DFP must describe the method of assuring funds for ISFSI decommissioning, including means for adjusting cost estimates and associated funding levels periodically over the life of the ISFSI. Additionally, the initial DFP must specify the volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination (either restricted or unrestricted release), and contain a certification that financial assurance for ISFSI decommissioning has been provided in the amount of the DCE.[6]

In addition, Section 72.30(c) requires that at the time of license renewal and at intervals not to exceed 3 years, the licensee must resubmit an updated DFP, "with adjustments as necessary to account for changes in cost and the extent of contamination." The resubmitted DFP (hereafter, updated DFP) must update the information submitted with the original or prior approved plan. The updated DFP must also specifically consider the effect of the following events on decommissioning costs: (1) spills of radioactive material producing additional residual radioactivity in onsite subsurface material; (2) facility modifications; (3) changes in authorized possession limits; and (4) actual remediation costs that exceed the previous cost estimate.[7] In accordance with 10 CFR 72.13(b) and 10 CFR 72.13(c), 10 CFR 72.30(b) and (c) are applicable to both specific-licensed and general-licensed ISFSIs.[8]

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[6] 10 CFR 72.30(b)(1)-(6).

[7] 10 CFR 72.30(c)(1)-(4).

[8] A specific license for the construction and operation of an ISFSI must be initiated by the submission of an application in accordance with the requirements of Subpart B of 10 CFR Part 72. NRC approval and issuance of a specific license, including the conditions of the license, is governed by Subpart C of 10 CFR Part 72. The specific license is a stand-alone document that is assigned a unique NRC license

The TMI-1 ISFSI is located on the site of TMI Nuclear Station, in Dauphin County, PA. CEG is authorized by the NRC, under a general license (License No. SFGL-65), to store spent fuel at the TMI-1 ISFSI. Prior to the transfer of the ISFSI general license from EGC to CEG, EGC had been similarly authorized to store spent fuel at the TMI-1 ISFSI. By letter dated July 15, 2021, the previous licensee, EGC, submitted an initial DFP for the ISFSI at TMI-1 for the NRC's review and approval (Agencywide Documents Access and Management System [ADAMS] Accession No. ML21196A412). By letter dated March 23, 2023, CEG submitted an updated DFP for the ISFSI at TMI-1 for the NRC's review and approval (ML23082A312). The NRC staff is reviewing the initial and updated DFP submittals.

In addition to preparing this EA and FONSI, the NRC staff is also conducting a financial review of EGC and CEG submittals to determine whether they include the information required by 10 CFR 72.30(b) and 72.30(c), and, accordingly, whether EGC and CEG have provided reasonable assurance that funds will be available to decommission the ISFSI at the TMI-1 site, including the requirement to meet the license termination criteria of 10 CFR 20.1402 or 10 CFR 20.1403.

1.2 Proposed Action

The proposed Federal action is the NRC staff's review and approval of EGC's initial DFP submitted in accordance with 10 CFR 72.30(b) and CEG's updated DFP submitted in accordance with 10 CFR 72.30(c), for the calendar years 2021 and 2023, respectively. Specifically, the NRC must determine whether EGC's initial DFP contains the information required by 10 CFR 72.30(b), whether CGE's updated DFP contains the information required by 10 CFR 72.30(c), and whether EGC and CEG have provided reasonable assurance that funds will be available to decommission the ISFSI. In order to approve the initial and updated DFPs, the NRC evaluates (i) whether the DCE adequately estimates the cost to conduct the required ISFSI decommissioning activities prior to license termination, including identification of the volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the license termination criteria and, (ii) whether the aggregate dollar amount of EGC's and CEG's financial instruments provide adequate financial assurance to cover the DCE and that the financial instruments meet the criteria of 10 CFR 72.30(e).

EGC and CEG are not requesting changes to the ISFSI's licensed routine operations, maintenance activities, or monitoring programs, or proposing new construction or land-disturbing activities as part of the initial or updated DFPs. The scope of the proposed action concerns only the NRC's review and approval of EGC's initial DFP and CEG's updated DFP. The scope of this proposed action does not include, and will not result in, the review and approval of decontamination or decommissioning activities or license termination for the ISFSI or for other parts of TMI-1. Prior to license termination, CEG will need to decontaminate and decommission the ISFSI. As part of future decommissioning activities, CEG will submit, for NRC approval, a license termination plan in accordance with 10 CFR 50.82. The NRC staff would conduct a separate environmental review in support of CEG's proposed license termination plan.

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docketing number. A general license is considered an incident of a 10 CFR Part 50 or 52 reactor license (see 10 CFR 72.210). The conditions of the general license are set forth by regulation in 10 CFR 72.212. The NRC does not issue any license document for a general license nor assign to it any unique NRC license docketing number.

1.3 Purpose and Need for the Proposed Action

The amended decommissioning planning rule (76 FR 35512) requires applicants and licensees to submit a DFP for NRC review and approval. Accordingly, the purpose and need for the proposed action is for the NRC to confirm that EGC and CEG will have sufficient funding to cover the costs of decommissioning the ISFSI.

2.0 ENVIRONMENTAL IMPACT

This EA addresses the environmental impact of the NRC's review and approval of EGC's initial DFP, submitted in accordance with 10 CFR 72.30(b), and CEG's updated DFP, submitted in accordance with 10 CFR 72.30(c). A separate financial review of the DFP, which evaluates the adequacy of the initial DFP and updated DFP, including the amount of the DCE and the method of assuring funds for decommissioning, will be documented by the NRC staff.

The NRC staff's review and approval of the initial DFP and updated DFP will not change the scope or nature of the operation of the ISFSI and will not authorize changes to licensed operations or maintenance activities. The NRC staff's review and approval of the initial DFP and updated DFP will not result in changes in the types, characteristics, or quantities of radiological or non-radiological effluents released into the environment from the ISFSI or result in the creation of solid waste. Moreover, the approval of the initial DFP and updated DFP will not authorize construction activity or facility modification.

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA),[9] requires Federal agencies to consider the effects of their undertakings on historic properties. In accordance with the NHPA implementing regulations at 36 CFR Part 800, "Protection of Historic Properties," the NRC staff's review and approval of EGC's initial DFP and CEG's updated DFP constitutes a Federal undertaking.[10] The NRC staff, however, determined that the approval of the initial DFP and updated DFP is a type of undertaking that does not have the potential to cause effects on historic properties, assuming such historic properties were present, because the NRC staff's review and approval of EGC's initial DFP and CEG's updated DFP will not authorize or result in changes to licensed operations or maintenance activities, or changes in the types, characteristics, or quantities of radiological or non-radiological effluents released into the environment from the ISFSI, or result in the creation of solid waste. Moreover, the review and approval of the initial DFP and updated DFP will not authorize construction activity, facility modification, or other land-disturbing activity. Additionally, future NRC approval of site-disturbing remediation activities conducted by CEG would require an NRC environmental review, including a Section 106 review. This environmental review would be conducted as part of the NRC's review and approval of CEG's license termination plan (per 10 CFR 50.82). Therefore, in accordance with 36 CFR 800.3(a)(1), no consultation is required under Section 106 of the NHPA.

Under Section 7 of the Endangered Species Act (ESA) of 1973,[11] prior to taking a proposed action, a Federal agency must determine whether (i) endangered and threatened species or their critical habitats are known to be in the vicinity of the proposed action and if so, whether (ii) the proposed Federal action may affect listed species or critical habitats. The NRC has determined that the proposed action will have no effect on listed species or their critical habitats

[9] See 54 U.S.C. 30618.
[10] See 36 CFR 800.16(y).
[11] See 16 U.S.C. 1531 et seq.

because the NRC staff's review and approval of EGC's initial DFP and CEG's updated DFP will not authorize or result in changes to licensed operations or maintenance activities, or changes in the types, characteristics, or quantities of radiological or non-radiological effluents released into the environment from the ISFSI, or result in the creation of solid waste. Moreover, the review and approval of the initial DFP and updated DFP will not authorize construction activity, facility modification, or other land-disturbing activity.

Future NRC approval of site-disturbing remediation activities conducted by CEG would require an additional NRC environmental review, including an ESA review. These environmental reviews would be conducted as part of the NRC's review and approval of CEG's license termination plan (per 10 CFR 50.82).

Therefore, the NRC staff has determined that the review and approval of the initial DFP and updated DFP is a procedural and administrative action that will not result in significant impact to the environment.

3.0 ALTERNATIVES

NEPA requires that Federal agencies consider alternatives to the proposed action (Section 102(2)(E) of NEPA). In addition to the proposed action, the NRC evaluated one alternative. The alternative action was to review but deny EGC's initial DFP and CEG's updated DFP (i.e., the no-action alternative). The NRC, however, would then request EGC and CEG to supplement or amend its proposed DFP to provide the required information in 10 CFR 72.30(b) and 72.30(c) and demonstrate adequate decommissioning financial assurance. The NRC could also take enforcement action, as needed, to reinstate compliance with 10 CFR 72.30(b) and 72.30(c). The end result would be the licensee's compliance with 10 CFR 72.30(b) and 72.30(c), leading to eventual NRC approval of the initial DFP and updated DFP. Therefore, for the no-action alternative, the environmental impact would be the same as those evaluated for approving the initial DFP and updated DFP. Approving the DFP has no significant impact on the environment as discussed in Section 2.0 of this EA.

4.0 AGENCIES AND PERSONS CONSULTED

The NRC consulted with the Pennsylvania Department of Environmental Protection (State) by letter dated March 17, 2025 (ML25042A625). The State did not respond.

The NRC staff has determined that Section 7 consultation under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) is not required for ISFSI DFP reviews because the proposed action is a procedural and administrative action that will not affect listed species or critical habitat. This determination is documented in a Note to File dated May 15, 2017 (ML17135A062).

5.0 CONCLUSION AND FINDING OF NO SIGNIFICANT IMPACT

Based on its review of the proposed action and in accordance with the requirements in 10 CFR Part 51, the NRC staff has determined that the NRC's review and approval of EGC's and CEG's proposed DFP for the calendar years 2021 and 2023 will not significantly affect the quality of the human environment. The NRC's approval of the proposed DFP does not result in changes in licensed activities, maintenance or construction activities, or effect changes in the permitted types or amounts of radiological effluents. Therefore, the NRC staff has determined

that pursuant to 10 CFR 51.31, preparation of an environmental impact statement is not required for the proposed action and pursuant to 10 CFR 51.32, a FONSI is appropriate.

6.0 REFERENCES

This FONSI, EA, and references related to this action can be found online at the NRC's Electronic Reading Room or the NRC's webpage, www.nrc.gov. The Electronic Reading Room can be accessed at http://www.nrc.gov/reading-rm/adams.html. From this website, you can access ADAMS, which provides text and image files of NRC's public documents. The ADAMS accession numbers for the documents are provided in this section.

If you do not have access to ADAMS or if there are problems in accessing ADAMS, contact the NRC's Public Document Room (PDR). The PDR 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, Monday through Friday, except Federal holidays.

49 FR 9381. *Federal Register* Notice. Final Rule "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments." March 12, 1984.

76 FR 35512. *Federal Register* Notice. Final Rule "Decommissioning Planning." June 17, 2011.

CEG, 2023. "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations." March 23, 2023. ADAMS Accession No. ML23082A312.

EGC, 2021. "Proposed Independent Spent Fuel Storage Installation (ISFSI) Decommissioning Funding Plan for Three Mile Island Nuclear Station, Unit 1." July 15, 2021. ADAMS Accession No. ML21196A412.

NRC, 2003. 2003/08/31-NUREG–1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, Final Report." Washington, DC. August 2003. ADAMS Accession No. ML032540811.

NRC, 2009. "Environmental Assessment re: Final Rule: Decommissioning Planning" (10 CFR Parts 20, 30, 40, 50, 70, and 72; RIN 3150-AI55). Washington, DC. February 2009. ADAMS Accession No. ML090500648.

NRC, 2017. ESA Section 7 No Effect Determination for ISFSI DFP Reviews (Note to File). May 15, 2017. ADAMS Accession No. ML17135A062.

NRC, 2025. "Review of the Draft Environmental Assessment and Finding of No Significant Impact for the Three Mile Island Unit 1 Independent Spent Fuel Storage Installation Updated Decommissioning Funding Plans." March 17, 2025 (ML25042A625).