

SAFETY EVALUATION BY THE
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
AMENDMENT NO. 256 TO RENEWED
FACILITY OPERATING LICENSE NO. DPR-35
AND REVISION OF ASSOCIATED TECHNICAL SPECIFICATIONS
HOLTEC PILGRIM, LLC AND
HOLTEC DECOMMISSIONING INTERNATIONAL, LLC
PILGRIM NUCLEAR POWER STATION
DOCKET NOS. 50-293 AND 72-1044

1.0 INTRODUCTION

By letter dated July 10, 2017 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML17066A130), the Nuclear Regulatory Commission (NRC) staff issued Amendment No. 246 for the Pilgrim Nuclear Power Station (Pilgrim). This amendment revised and removed certain requirements from the Section 5, "Administrative Controls," portions of the Pilgrim technical specifications (TS) that are not applicable to the facility in a permanently defueled condition. In addition, the amendment added definitions to TS Section 1, "Definitions." Also, the amendment made additions to, deletions from, and conforming administrative changes to the TS.

By letter dated October 28, 2019 (ADAMS Accession No. ML19275E425), the NRC staff issued Amendment No. 250 to RFOL No. DPR-35 for Pilgrim. The amendment revised the Pilgrim Renewed Facility Operating License (RFOL) and the associated TS to permanently defueled technical specifications (PDTs) consistent with the permanent cessation of operations and permanent removal of fuel from the reactor vessel.

By letter dated March 17, 2021 (ADAMS Accession No. ML21076A404), as supplemented on May 28, 2021 (ADAMS Accession No. ML21148A199), HDI submitted a license amendment request seeking NRC review and approval of its proposed revised Pilgrim RFOL and associated TS to reflect permanent removal of spent fuel from the spent fuel pool (SFP) and its transfer to dry cask storage within an on-site controlled ISFSI. Specifically, HDI states in its application that:

Once all spent fuel assemblies have been transferred to one of the site controlled ISFSI locations, all remaining LCOs [limiting conditions for operation] and associated Surveillance Requirements (SRs) will no longer be applicable and are proposed for deletion. The proposed FL [facility license] and TS revisions reflect the removal of all spent fuel from the SFP and will become applicable only after the last spent fuel assembly has been removed from the SFP and stored in an ISFSI. The revised TS will be referred to as the ISFSI Only Technical Specifications (IOTS).

With the proposed changes, HDI will follow the HDI Fleet Decommissioning Quality Assurance Program (DQAP) (ADAMS Accession No. ML21011A106) and remove certain TS administrative controls. The licensee intends to add controls to its Defueled Safety Analysis Report (DSAR). These changes would comport with the status of the facility, as well as the reduced scope of structures, systems, and components (SSCs) necessary to ensure plant safety once all spent fuel has been moved to the new Pilgrim ISFSI, an activity which is currently scheduled for completion by the November 15, 2021 (ADAMS Accession No. ML21117A402). HDI plans to safely move all spent fuel (casks currently on the original ISFSI and those that result from the

removal of the remaining spent fuel in the Pilgrim SFP) to ISFSI II (the new ISFSI on-site) by the end of the final phase of its spent fuel transfer campaign.

2.0 REGULATORY EVALUATION

This safety evaluation assesses the acceptability of the proposed changes to the Pilgrim RFO license and the proposed Pilgrim PDTs (referred to in the application as the IOTS) that would apply after all the Pilgrim spent fuel has been transferred from the SFP to the new ISFSI on-site. The regulatory requirements and associated guidance on which the NRC based its acceptance and evaluation of this amendment application follows.

In 1996, the NRC added regulations, including 10 CFR 50.36(c)(6) and (e) ("Decommissioning of Nuclear Power Reactors", 61 FR 39278; July 29, 1996) clarifying that existing technical specifications for reactors that are not authorized to operate will remain effective until removed or modified by license amendment. The Commission explained (61 FR 39283):

In addition to continuing requirements that the licensee must comply with, such as 10 CFR part 20, regarding protection of workers and the public from radiation, and appendix B to 10 CFR part 50 regarding quality assurance, the final rule explicitly extends certain technical requirements to cover decommissioning activities (e.g., Secs. 50.36, 50.36a, 50.36b, and Appendix I regarding technical specifications for surveillance requirements, administrative controls, control of effluents, and conditions to protect the environment). Thus, there will be a licensing basis appropriate to the activities undertaken using the Sec. 50.59 process during decommissioning. By maintaining certain requirements throughout the decommissioning process, licensees will be able to use the existing Sec. 50.59 process to perform decommissioning activities and thus provide comparable assurance that protection of the public health, safety, and the environment will not be compromised.

Accordingly, Title 10 of the *Code of Federal Regulations* (10 CFR) section 50.36(e) states that the provisions 10 CFR 50.36 "apply to each nuclear reactor licensee whose authority to operate the reactor has been removed by license amendment, order, or regulation." And 10 CFR 50.36(c)(6) states:

Decommissioning. This paragraph applies only to nuclear power reactor facilities that have submitted the certifications required by § 50.82(a)(1)[1] and to non-power reactor facilities which are not authorized to operate. Technical specifications involving safety

1 Pursuant to 10 CFR 50.82(a)(1)(i), "[w]hen a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC." Per 10 CFR 50.82(a)(1)(ii), "[o]nce fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC." Per 10 CFR 50.82(a)(2), "[u]pon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, ..., the 10 CFR part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel."

limits, limiting safety system settings, and limiting control system settings; limiting conditions for operation; surveillance requirements; design features; and administrative controls will be developed on a case-by-case basis.

Under 10 CFR 50.92(a), determinations on whether to grant an applied-for license amendment are to be guided by the considerations that govern the issuance of initial licenses to the extent applicable and appropriate. Both the common standards for licenses in 10 CFR 50.40(a) (regarding, among other things, consideration of the operating procedures, the facility and equipment, the use of the facility, and other technical specifications, or the proposals) and those specifically for issuance of operating licenses in 10 CFR 50.57(a)(3), provide that there must be reasonable assurance that the activities at issue will not endanger the health and safety of the public, and that the applicant will comply with the Commission's regulations.

Therefore, when deciding whether to amend the technical specifications for a permanently shutdown and defueled reactor, such as Pilgrim Nuclear Power Station who has submitted its 50.82(a)(1) certification (ADAMS Accession No. ML19161A033), the staff considers, on a case-by-case basis, whether the proposed amended technical specifications, along with the operating procedures, the facility and equipment, and the use of the facility collectively provide reasonable assurance that the applicant will comply with the Commission's regulations, and that the health and safety of the public will not be endangered.

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed ISFSI-Only TS changes, as described in the amendment application dated March 17, 2021 (ADAMS Accession No. ML21076A404), as supplemented by letter dated May 28, 2021 (ADAMS Accession No. ML21148A199).

3.1 Background

Pilgrim has been shut down since May 31, 2019. Entergy Nuclear Operations, Inc. (ENOI), the holder of the RFOL, submitted certifications for permanent cessation of reactor operations on May 31, 2019 and permanent removal of fuel from the Pilgrim reactor vessel on June 10, 2019. The license transfer to HDI was approved by NRC, and NRC issued an Order and conforming license amendment. HDI is authorized to possess and store irradiated nuclear fuel at the permanently shutdown and defueled Pilgrim facility. After the Pilgrim reactor was shut down, all fuel assemblies were removed from the reactor vessel, and placed in the Pilgrim SFP. The licensee is currently in the process of transferring the remaining fuel from the Pilgrim SFP to one of the two on-site ISFSIs, with HDI's second and final spent fuel transfer campaign on-site to begin mobilizing in May 2021. HDI estimates to complete movement of all spent fuel from the SFP to ISFSI II by November 15, 2021 (ADAMS Accession No. ML21117A402). After all the irradiated fuel has been transferred from the SFP to the ISFSI II, many of the requirements in the current PDTs would be inapplicable or no longer appropriate. The licensee has proposed multiple changes to the Pilgrim PDTs to reflect this change in the requirements for spent fuel storage once all fuel assemblies have been moved to a Pilgrim ISFSI.

In its application, HDI requested that the NRC review and approve the proposed ISFSI-Only PDTS for Pilgrim. The proposed amendment would modify the Pilgrim RFOL and PDTS to reflect the condition of all irradiated fuel being in dry storage within the on-site ISFSI (ISFSI II) at Pilgrim, using casks certified for use under a general license issued in accordance with 10 CFR 72.210. The amendment would also revise the Pilgrim PDTS to eliminate operational requirements, as well as certain design requirements involving storage of spent fuel, that will no longer be applicable following the transfer of the last spent fuel assembly from the SFP to an on-site ISFSI at Pilgrim.

In addition, a new PDTS design requirement is proposed to prohibit storage of spent fuel in the SFP. This change would align the proposed license amendment with the proposed "Pilgrim Nuclear Power Station (PNPS) Independent Spent Fuel Storage Installation Facility (ISFSI) Only Emergency Plan and its associated Emergency Action Level scheme" (ADAMS Accession No. ML21049A192), and the approved "Pilgrim Nuclear Power Station Independent Spent Fuel Storage Installation-Only Security, Training and Qualification, Safeguards Contingency Plan" (ADAMS Accession No. ML21214A117), which are predicated on completion of the offload of spent fuel from the SFP and transfer to the on-site ISFSI II.

The proposed changes to the RFOL and PDTS also involve removing administrative requirements from PDTS Section 5, "Administrative Controls" with parallel requirements being added to the Pilgrim DSAR.

The NRC staff notes that the existing PDTS contain LCOs that provide for appropriate functional capability of equipment required for safe storage and management of irradiated fuel located in the SFP. As such, the existing PDTS provide a level of control more than that needed for safe storage and management of irradiated fuel with all fuel stored in an ISFSI. The majority of the existing PDTS are only applicable when irradiated fuel assemblies are within the SFP. Once all spent fuel assemblies have been transferred to the an on-site ISFSI at Pilgrim, all remaining LCOs (and associated SRs) will no longer be applicable and are being proposed for deletion by the licensee.

In addition, the NRC staff concludes that after all spent fuel assemblies have been transferred to an on-site ISFSI (ISFSI II) at Pilgrim, there would be no longer any SSCs at Pilgrim that are required to be relied upon for accident mitigation. Therefore, with no fuel stored in the SFP, none of the SSCs at Pilgrim would meet the definition of a safety-related SSCs as stated in 10 CFR 50.2, "Definitions." Since there are no accident scenarios that apply to the condition with all spent fuel stored in dry casks within an ISFSI, no analyzed accidents associated with the storage of fuel would remain applicable to Pilgrim once all the spent fuel is stored in dry casks. In addition, the NRC approved spent fuel storage casks and canisters to be used for spent fuel storage are subject to their own Certificate of Compliance and Cask Technical Specifications. In a permanently defueled condition with all spent fuel in storage within an ISFSI, the scope of equipment and parameters that need be included in the Pilgrim PDTS is limited to a description of the design features and high radiation area administrative controls.

3.2 Renewed Facility Operating License Changes

License Condition 3.B

The licensee proposed to change the wording in this license condition to correctly describe the incorporation in the license of the Pilgrim ISFSI-Only PDTS. The current wording was placed in the license condition to support the implementation of the Pilgrim ISFSI-Only PDTS and is proposed to be revised to correctly describe how changes to the IOTS are being incorporated into the license. This is an editorial change that revises the license condition wording associated with incorporation of the Pilgrim ISFSI-Only PDTS into the license. On this basis, the NRC staff finds the revision of this license condition acceptable.

License Condition 3.C

The licensee proposes to eliminate License Condition 3.C, "Records," to remove the recordkeeping requirement from the license and relocate to licensee-controlled documents. HDI states that the license condition requires HDI to keep facility records in accordance with the requirements of Technical Specifications, but the review of the existing TS does not identify a record process or any specific records that must be captured. Also, HDI explains the license condition does not provide any specific record keeping requirements other than to keep records and notes that HDI identifies specific record keeping requirements in Section 17.0 of the Decommissioning Quality Assurance Program (DQAP) and in Section 5.5 of the Site DSAR. Both documents are maintained for site decommissioning purposes as required per 10 CFR Part 50 regulatory requirements. Also, HDI will have to comply with 10 CFR 72.212 recording keeping requirements for the spent fuel storage cask systems located in an ISFSI. The NRC staff notes that both the DQAP and the DSAR documents are controlled by HDI and have regulatory change control review requirements per the 10 CFR 50.54(a) and 10 CFR 50.59, respectively. As noted during the decommissioning rulemaking, using existing change processes during decommissioning will provide comparable assurance that protection of the public health, safety, and the environment will not be compromised. Therefore, the NRC staff finds this change acceptable for Pilgrim.

License Condition 3.K

The licensee proposed to delete License Condition 3.K in its entirety, as no longer applicable, the license condition regarding mitigation strategies for large fires and explosions. The license condition incorporated the requirements for mitigation strategies found in Section B.5.b of Order EA-02-026, dated February 25, 2002 (ADAMS Accession No. ML020510305). NRC letter dated November 28, 2011 (No. ML111220447) partially rescinded Order EA-02-026 but, indicated that Interim Compensatory Measure (ICM) B.1.a remained in effect at Pilgrim. In a letter dated October 31, 2018 (ADAMS Accession No. ML18309A036), ENOI requested that the NRC rescind ICM B.1.a in Order EA-02-026 and rescind Order EA-06-137 in its entirety for Pilgrim based on its transition from an operating reactor to a nonoperating reactor. By letter dated July 2, 2019 (ADAMS Accession No. ML19115A229), the NRC rescinded the ICM B.1.a in Order EA-02-026 and rescinded Order EA-06-137 in its entirety for Pilgrim. Therefore, there are no longer any portions of Order EA-02-026 that apply to Pilgrim. On this basis, the NRC staff finds the deletion of the license condition regarding mitigation strategies for large fires and explosions is acceptable.

License Condition 3.L

The licensee proposed to delete License Condition 3.L in its entirety. The licensing condition incorporated the requirements found in attachment 2 of Order EA-06-137, "Order Requiring Compliance with Key Radiological Protection Mitigation Strategies," dated June 20, 2006 (ADAMS Accession No. ML061600076). The order required implementation of a certain key radiological protection strategy for the purpose of allaying the effects of a loss of coolant accident for the reactor vessel. Pilgrim has been certified for permanent shutdown and has defueled the reactor per 10 CFR 50.82(a)(1)(i) and (ii) (ADAMS Accession No. ML19161A033). Therefore, the effects of a loss of coolant accident in the reactor vessel are precluded and Order EA-06-137 no longer provides a fuel protective function.

In a letter dated October 31, 2018 (ADAMS Accession No. ML18309A036), ENOI requested that the NRC rescind ICM B.1.a in Order EA-02-026 and rescind Order EA-06-137 in its entirety for Pilgrim based on its transition from an operating reactor to a nonoperating reactor. By letter dated July 2, 2019 (ADAMS Accession No. ML19115A229), the NRC rescinded the ICM B.1.a in Order EA-02-026 for Pilgrim and rescinded ICM Order EA-06-137 in its entirety for Pilgrim. Therefore, the rescinded Order EA-06-137 does not continue to apply to Pilgrim. The effects of a loss of coolant accident in the reactor vessel are precluded and Order EA-06-137 no longer provides a fuel protective function. On this basis, NRC staff finds the deletion of the radiological protection strategy against loss of coolant accident for the reactor vessel license condition acceptable for Pilgrim.

License Condition 7

The licensee proposed to eliminate License Condition 7. This proposed action would remove License Renewal Commitments applicable to operation of the facility in the extended period of operation authorized by the license renewal amendment. The purpose of these License Renewal Application commitments was to ensure that the aging effects of equipment important to the safe operation of the reactor are managed so that the functionality of SSCs is maintained during the facility's period of extended operation.

In a letter to the NRC, dated June 8, 2012 (ADAMS Accession No. ML12164A334), ENOI documented that it had completed implementation of commitment activities that were required to be completed prior to entering the period of extended operation at Pilgrim.

Pilgrim has permanently ceased operations, however, during decommissioning equipment related to the fire protection system, to address fire events that could result in radiological hazards per the requirements of 10 CFR 50.48(f), may be required beyond the permanent cessation of operations, and therefore may be subject to an aging management program.

Previously, the NRC staff approved the relocation of the Pilgrim License Renewal Commitments for aging management into Section 7, "Aging Management," of the DSAR. The established controls provided for maintaining the DSAR were in accordance with 10 CFR 50.71(e) and the changes to these License Renewal Commitments are evaluated and controlled pursuant to the change review requirement criteria identified in 10 CFR 50.59.

Further, the spent fuel storage cask systems located in an ISFSI are subject to their own Certificate of Compliance and Cask Technical Specification requirements. These cask protection requirements are not referenced or identified License Condition 7 of the Pilgrim RFOL. Also, the existing controls for maintaining the DSAR will continue to be used to address and control License Renewal Commitments and therefore, the NRC staff concludes that it is acceptable to delete License Condition 7 from the Pilgrim RFOL.

3.3 Technical Specification Changes

Cover Sheet and Associated Table of Contents

The licensee has proposed to revise the title sheet for Appendix A from “To Facility License DPR-35 Permanently-Defueled Technical Specifications and Bases for the Pilgrim Nuclear Power Station Plymouth, Massachusetts,” to Appendix A “To Renewed Facility License DPR-35 ISFSI Only Technical Specifications for Pilgrim Nuclear Power Station Plymouth, Massachusetts.” The revision would reflect that the PDTS apply to the RFOL and an ISFSI-Only configuration. Also, this change would align the title of Appendix A with the site license and the decommissioning status of the plant. This is an editorial change that more correctly labels the Appendix on the cover sheet; therefore, the NRC staff finds this revision acceptable.

Definitions

The licensee has proposed to delete in its entirety, as no longer needed, the “Definitions” section (Section 1.0) from the PDTS. The purpose of the definitions is to provide uniform interpretation of frequently used terms in the PDTS. After transfer of the spent fuel from the SFP to one of the Pilgrim On-site ISFSI is complete, the PDTS sections that reference the frequently used terms would be eliminated or relocated, upon NRC approval. Therefore, the definitions would no longer be needed. The NRC staff finds that since the terms would no longer be needed after the spent fuel has been removed from the SFP and transferred to the ISFSI, this change is administrative in nature, and would not impact the continued safe storage and maintenance of spent fuel in the ISFSI. The NRC staff therefore finds it acceptable to delete the Definitions section of the Pilgrim PDTS in its entirety.

Section 2.0

HDI states in its application that the Technical Specification Section 2.0 was previously deleted from its TS. HDI proposes to remove the page that was retained in the TS after Section 2.0 was deleted. The NRC staff agrees with HDI that this is an editorial change to eliminate pages that no longer contain TS requirements. HDI provided a markup of its TS in Attachment 1 of its application to show what it is proposing be removed from the TS. Because this would be an editorial change, the NRC staff finds it acceptable to remove the previously retained but no longer applicable contents of Section 2.0 of the Pilgrim TS.

Section 3.0/4.0

HDI states that all information in Section 3.0 was previously deleted, and the only remaining specification located in this TS section is specification SR 4.0.3. SR 4.0.3 provides general requirements applicable to actions to take if it is discovered that a required surveillance was not performed within its specified Surveillance Frequency. The NRC staff agrees with HDI in that after the transfer of spent fuel from the SFP to an ISFSI is complete, there will no longer be any Limiting Conditions for Operation or Surveillance Requirements to perform. Therefore, there are

no surveillance requirements remaining to apply these general missed surveillance controls. This section in its entirety is acceptable and has no impact on continued safe storage and maintenance of spent fuel located dry casks in a site controlled ISFSI. Removal of this section reflects the permanent removal of spent fuel from the Pilgrim SFP. The NRC staff finds that since Pilgrim would no longer store spent fuel in the SFP after all the fuel is transferred to ISFSI II on-site, and therefore concludes that it is acceptable to remove this section of the PDTS in its entirety with no impact on the requirements for spent fuel safety and storage in the ISFSI-Only configuration.

Section 3.0/4.10

HDI proposes to remove the section "Spent Fuel Storage," LCO and Surveillance Requirement, based on the permanent removal of spent fuel from the SFP. TS Section 3.0/4.10 does not apply when there are no fuel assemblies stored in the SFP. These requirements are related to assuring the functional capability of equipment required for safe storage and maintenance of spent fuel stored in the SFP. The NRC staff concludes that these specifications will no longer be needed following the transfer of all spent fuel assemblies from the SFP to an ISFSI. The NRC staff finds it acceptable that these requirements be deleted in their entirety.

Section 4.1

HDI proposes to revise Section 4.1, "Site Location," to eliminate the reactor center line location information based on permanently defueled reactor status. Section 4.1 would be revised to remove the site exclusion area description because it is based on requirements regarding dose analyses of reactor accidents that cannot happen when the reactor is permanently defueled. HDI indicates that Section 4.1 should be removed to eliminate the reactor center line location information based on permanently defueled reactor status. Further, HDI states that "the proposed content of IOTS 4.1 describing the site location is consistent with the level of detail provided in the comparable design features site location descriptions in the TS for Kewaunee approved by the NRC on June 7, 2017 (Reference 15 [ADAMS Accession No. ML17123A031]), and the TS for Vermont Yankee (Reference 16 [ADAMS Accession No. ML8156A179])." The NRC staff finds that the removal of the description of the exclusion area boundary does not alter any regulatory requirements related to licensee authority over the site location and does not have an impact on continued safe storage and maintenance of irradiated fuel in the ISFSIs. The NRC staff finds that the removal or change of this design feature descriptions will have no impact on the requirements for spent fuel safety and storage in the ISFSI-Only configuration, and the proposed modification is therefore acceptable.

Section 4.3

HDI proposes to modify Section 4.3, "Spent Fuel Storage," of the PDTS, which describes the requirements for safe plant systems associated with the storage and maintenance of spent nuclear fuel stored in the SFP. HDI states that these requirements do not apply when there are no fuel assemblies stored in the SFP. HDI proposes to remove the Section 4.3 contents and replace it with "Spent Fuel shall not be stored in the Spent Fuel Pool". Section 4.3.1, 4.3.2, 4.3.3, and 4.3.4 would be eliminated because there will no longer be any fuel assemblies in the SFP or need for the associated PDTS requirements. HDI proposes that a new design feature would be added by stating that spent fuel shall not be stored in the SFP. This new design feature documents the premise on which the proposed amendment is based (i.e., that spent fuel

will no longer be stored in the SFP). The NRC staff finds that the removal or change of these design feature descriptions will have no impact on the requirements for spent fuel safety and storage in the ISFSI-Only configuration, and the proposed deletion is therefore acceptable. The NRC staff finds that adding the new design feature, that spent fuel shall not be stored in the SFP is acceptable if the SFP protection requirements are eliminated.

Section 5.0

HDI proposes to revise Section 5.0, "Administrative Controls" of the PDTS to either delete requirements that are no longer necessary based on defueled SFP status or relocate the specification to a licensee-controlled document. Section 5.0 "Administrative Controls," of the PDTS establishes the requirements associated with personnel, administrative programs, reporting, and PDTS basis control. HDI proposes that all the sections in PDTS Section 5.0, except Section 5.7, "High Radiation Area," to control ongoing decommissioning activities, be deleted in their entirety, with the pertinent information relocated to the Pilgrim DSAR.

Specifically, the licensee proposed to eliminate Section 5.1, "Responsibility," which provides a description of requirements for the plant manager and the shift manager. HDI proposes that the responsibilities of the plant manager be moved to the DSAR and that it be revised to "manager responsible for overall operational activities" when it is relocated to the DSAR. HDI states that this title change does not change any requirements, qualifications, or responsibilities of the individual in this position, and is strictly an editorial change to provide flexibility in the event of organization changes. The NRC staff finds this change acceptable for this change would be consistent with previously approved changes to position titles in the TS to allow facility specific titles to be identified in licensee-controlled documents. HDI indicates that the shift manager responsibilities are being eliminated because after all spent fuel is permanently removed from the SFP, the need for the shift supervisor and shift command function for spent fuel management no longer exists. HDI explains that the position of shift supervisor described in TS 5.1.2 is a holdover from the control room function of supervising multiple functions of an operating nuclear power plant. Since this change is editorial in nature and consistent with the level of responsibilities when all spent fuel is stored in the ISFSI, the NRC staff finds the proposed changes described above acceptable.

The licensee proposed to delete the requirements in Section 5.2, "Organization," which provides a description of, and requirements for, on-site and offsite organizations and facility staffing, includes lines of authority and staff responsibilities, and specifies requirements for fuel handling operations and supervision. HDI states (ADAMS Accession No. ML21148A199) that the administrative controls provided in the TS 5.2.1 will be incorporated in the DSAR verbatim, except for: (1) TS 5.2.1.(b), reference to "plant manager" will be revised to "manager responsible for overall operational activities" in order to conform to the description of the corresponding management position in Section 1.3 of the Fleet DQAP (ADAMS Accession No. ML20240A342) and (2) TS 5.2.1.(d) reference to individuals who "train the Certified Fuel Handlers" will not be incorporated into the DSAR.

Section 5.2.1.d provides requirements for organizational freedom of the Certified Fuel Handler (CFH) trainers, and the health physics and QA personnel. HDI proposed to eliminate the portion of Section 5.2.1.d pertaining to CFH trainers, since this is no longer a required position because all fuel has been removed from the reactor and SFP.

Section 5.2.2, "Unit Staff," establishes the requirements for personnel required at Pilgrim to assure safe facility operation and the safety of the nuclear fuel. This section provided for adequate staff to ensure the safe storage and movement of fuel, including an individual qualified in radiation protection procedures and designation of fire responsibilities. The DQAP and DSAR address the necessary organizational requirements for Pilgrim after all spent fuel has been transferred to the ISFSI. Following the transfer of all spent fuel to the ISFSI, and the new provision in Section 5.2 of the PDTS prohibiting storage of fuel in the SFP, there would no longer be a need for CFHs or the other specified personnel requirements in this section.

After implementation of the Pilgrim ISFSI-Only PDTS, storage of spent fuel in the SFP will be prohibited; accordingly, there will no longer be a need for many of the personnel described in Section 5.2, or the associated training programs. Therefore, the proposed deletions would have no impact on safe storage and maintenance of spent fuel in the ISFSI and are therefore acceptable to the NRC staff.

Section 5.3, "Facility Staff Qualifications," establishes the minimum requirements for staff qualification. American National Standards Institute Standard 3.1-1978, "Selection and Training of Nuclear Power Plant Personnel," referenced in Section 5.3, contains the minimum requirements associated with facility staff qualifications. The licensee proposed to delete Section 5.3.1 from the TS and to relocate the requirement to the DSAR with the exception that the referenced "Quality Assurance Program Manual" will be revised to identify the Decommissioning Quality Assurance Program when relocated. The licensee states that after these administrative controls are incorporated into the DSAR, any future changes would be controlled in accordance with 10 CFR 50.59. Also, the licensee proposed to delete PDTS 5.3.2 because following the transfer of all spent fuel to the ISFSI, storage of spent fuel in the SFP will be prohibited upon implementation of this proposed amendment, thus there will no longer be a need for CFH or the associated training programs. Therefore, the NRC concludes that the proposed PDTS deletions would have no impact on safe storage and maintenance of spent fuel in the ISFSI and are therefore acceptable to the NRC staff.

Section 5.4 "Procedures," addresses procedure requirements to ensure quality assurance requirements for operation of nuclear power plants. The licensee proposes to remove this section. proposed to relocate the requirements of this section to the DSAR administrative controls section, except for 5.4.1(a). which specifies procedures applicable to the safe storage of nuclear fuel as recommended in Appendix A, "Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors," to Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, dated February 1978. This subsection would be eliminated as it would be no longer applicable because after all the spent fuel is located on an on-site Pilgrim ISFSI, there would be no fuel handling operations in the SFP. Also, as identified above, following the transfer of the spent fuel to the ISFSI, the proposed change to TS 4.3 will prohibit the storage of spent fuel in the SFP. The NRC notes that after all the spent fuel is transferred to ISFSI II, the proposed change to TS 4.3 will prohibit the storage of spent fuel in the SFP, and the formal procedural controls are inapplicable. The licensee intends to add to its DSAR controls on procedures analogous to most of the items removed from TS 5.4. The NRC staff notes that once these administrative controls are incorporated into the DSAR, any future changes are controlled in accordance with 10 CFR 50.59.

Section 5.5.1, "Offsite Dose Calculation Manual," requires the licensee to establish, implement, and maintain a program for the Offsite Dose Calculation Manual (ODCM). As described in TS 5.5.1.a, the ODCM contains the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program. Further, as described in TS 5.5.1.b, the ODCM also contains the radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating, and Radioactive Effluent Release, reports required by Specification 5.6.2 and Specification 5.6.3. TS 5.5.1.c controls licensee-initiated changes to the ODCM. The licensee proposes to delete TS 5.5.1, and to place analogous requirements into its DSAR, where they will be controlled via 10 CFR 50.59. The staff notes that TS 5.5.1.a and TS 5.5.1.b describe the ODCM, but because the ODCM has long been established, and further this description will be in the DSAR, there is not a need to maintain the description in TS. The processes and procedures for licensee-initiated changes to the ODCM similarly do not need to be in TS to assure safety; the controls from 50.59 are sufficient. Further, as discussed below, the licensee is proposing to remove the TS that require the licensee to use the ODCM (i.e., TS 5.6.2 and 5.6.3) to generate certain reports. Accordingly, any licensee-initiated changes to the ODCM must not impact the ability of the ODCM to provide appropriate control.

Section 5.5.4, "Radioactive Effluent Controls Program", requires the licensee to have a program contained in the ODCM that conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. TS 5.5.4 specifies 10 elements that the radioactive effluent controls program must include (e.g., limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released to unrestricted areas, conforming to 10 CFR 50, Appendix I). The licensee proposed to delete TS 5.5.4, and place analogous requirements in the DSAR, except for: (1) references to iodine-131 and iodine-133 in 5.5.4.g.2 and 5.5.4.i (not necessary because of the radioactive decay and short half-lives (approximately 8 days and 20.83 hours, respectively, and time since permanent cessation of reactor operation), (2) references to noble gases released from the facility (not needed for fuel in dry cask storage), and (3) references to "gaseous" effluents and monitoring will be revised to "airborne" effluents and monitoring which will be incorporated based on conditions applicable to post fuel removal from SFP to dry casks located in the ISFSI. The staff finds that because the ODCM has long been established and contains the effluent controls program, and further the elements of the program will be in the DSAR, there is not a need to maintain the description in TS.

Section 5.5.6, "Technical Specification (TS) Bases Control Program," establishes the requirements to update and maintain the bases for the Pilgrim TSs. Per 10 CFR 50.36(a)(1), each applicant for an operating license shall include in the application proposed technical specifications in accordance 10 CFR 50.36, and "[a] summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications." Because the bases are not part of the technical specifications included in the license issued by the NRC under 10 CFR 50.36(b), the removal of a bases control program will not alter any controlling requirement in the Pilgrim ISFSI-Only PDTS. Therefore, the proposed deletion of these requirements is acceptable to the NRC staff.

Section 5.6, "Reporting Requirements," provides descriptions and requirements for reports that are to be submitted in accordance with 10 CFR 50.4. TS 5.6.2 requires the licensee to submit its Annual Radiological Environmental Operating Report covering the operation of the facility during the previous calendar year by May 15 of each year and states what is required in the report. TS 5.6.3 requires the licensee to submit its Radioactive Effluent Release Report covering the operation of the facility by May 15th of each year, and also states what is required in the report. The licensee proposed to delete these sections from the PDTS and relocate the requirements verbatim to the DSAR. HDI states that any future changes will be controlled in accordance with 10 CFR 50.59. The NRC staff concludes that for the Pilgrim ISFSI-Only TS, this will provide an appropriate level of control.

3.4 Conclusion

Based on the NRC staff's case-by-case review of the Pilgrim ISFSI-Only proposed amendment to the PDTS, in consideration of the permanently shutdown and defueled status of the facility, and the proposed transfer of all remaining spent fuel from the Pilgrim SFP to the ISFSI II by mid-November 2021, reasonable assurance of public health and safety will be maintained.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment to the Pilgrim 10 CFR Part 50 RFOL and PDTS includes changes to requirements with respect to installation or use of a facility component located within the protected area, changes to surveillance requirements, and changes to recordkeeping, reporting, or administrative procedures or requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, which was published in the Federal Register on April 20, 2021 (86 FR 20526), and there have been no public comments on this finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22 (c)(9) and 10 CFR 51.22(c)(10)(ii). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 STATE CONSULTATION

On July 13, 2021 (ADAMS Accession No. ML21200A235), the NRC staff notified the Commonwealth of Massachusetts State Liaison Official to the NRC, Ms. Samantha Phillips, Director, Massachusetts Emergency Management Agency, regarding the proposed changes to the Pilgrim license and PDTS to reflect the transfer of all spent fuel into dry cask storage at the Pilgrim ISFSI II, and the NRC staff's intent to approve the Pilgrim ISFSI-only license changes and PDTS revisions via license amendment. The Commonwealth of Massachusetts responded on July 22, 2021 (ADAMS Accession No. ML21211A516) with no comments.

6.0 CONCLUSION

Based on review of the licensee's application dated March 17, 2021 (ADAMS Accession No. ML21076A404), as supplemented on May 28, 2021 (ADAMS Accession No. ML21148A199), and the proposed changes to the RFOL and PDTS to reflect the removal of all spent nuclear fuel from the Pilgrim SFP and transfer to dry cask storage in the on-site ISFSIs, the NRC staff finds that the proposed changes provide reasonable assurance that the applicant will comply with the Commission's regulations, and that the health and safety of the public will not be endangered. Further, the changes proposed by this license amendment request would delete requirements that will no longer be applicable following the transfer of all spent nuclear fuel to the Pilgrim ISFSI II. Based on its review, the NRC staff concludes that the licensee's request adequately addresses the applicable regulatory safety requirements for a permanently shutdown nuclear power facility with all spent nuclear fuel transferred to dry cask storage in an ISFSI. Therefore, the NRC staff concludes that the licensee's proposed Pilgrim ISFSI-Only PDTS are acceptable.

The NRC staff also concludes, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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