



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
RELATED TO AMENDMENT NO. 270 TO FACILITY OPERATING LICENSE NO. DPR-28
ENTERGY NUCLEAR OPERATIONS, INC.
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

1.0 INTRODUCTION

By letter dated September 23, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML 13273A204), Entergy Nuclear Operations, Inc. (ENO, the licensee), submitted a notification to the U.S. Nuclear Regulatory Commission (NRC) indicating that it would permanently shut down Vermont Yankee Nuclear Power Station (VY) in the fourth calendar quarter of 2014. On December 29, 2014, ENO permanently ceased power operations at VY. On January 12, 2015, ENO certified that it had permanently defueled the VY reactor vessel (ADAMS Accession No. ML 15013A426). Consequently, pursuant to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), section 50.82(a)(2), the VY renewed facility operating license (DPR-28) no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

By letter dated March 28, 2014 (ADAMS Accession No. ML 14091A291), ENO requested an amendment to revise the VY renewed facility operating license and the associated technical specifications (TS) to adopt permanently defueled TS (PDTS) consistent with the permanent cessation of reactor operation and permanent defueling of the reactor. By letter dated October 7, 2015 (ADAMS Accession No. ML15117A551), the NRC issued an amendment to the VY TS and associated license conditions to reflect the permanently defueled condition.

By application dated July 20, 2017 (ADAMS Accession No. ML17206A200), the licensee requested changes to the VY Renewed Operating Licenses and PDTS to reflect the removal of all spent nuclear fuel from the VY spent fuel pool and its transfer to dry cask storage within an onsite Independent Spent Fuel Storage Installation (ISFSI). The proposed changes include the relocation of administrative controls from the PDTS to the VY Quality Assurance Program Manual (QAPM). These changes will reflect the updated status of the facility, as well as the reduced scope of structures, systems, and components necessary to ensure plant safety once all spent fuel has been permanently moved to the VY ISFSI, an activity which is currently scheduled for completion in 2018.

2.0 REGULATORY EVALUATION

This safety evaluation assesses the acceptability of the proposed VY ISFSI-Only TS. These TS would replace the current VY PDTs after all of the VY spent fuel has been transferred from the spent fuel pool to the ISFSI. The regulatory requirements and associated guidance on which the NRC based its acceptance and evaluation of the VY ISFSI-Only TS follows.

The NRC's regulatory requirements related to the content of technical specifications are located in 10 CFR 50.36, "Technical specifications." In promulgating these requirements, the Commission placed emphasis on those matters related to the prevention of accidents and the mitigation of accident consequences. Specifically, the Commission noted that applicants were expected to incorporate into their TS "those items that are directly related to maintaining the integrity of the physical barriers designed to contain radioactivity" (Reference 1). Pursuant to 10 CFR 50.36, TS are required to include items in the following five categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. However, the rule does not specify the particular requirements to be included in a plant's TS.

On July 22, 1993, the Commission published a Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors (Reference 2). The Policy Statement discussed the scope and purpose of TS for nuclear power plants and included guidance criteria to be used in determining which of the LCOs and associated surveillances should be included in the TS. The Policy Statement established four criteria to define the scope of equipment and parameters to be included in the improved standard technical specifications. These criteria were developed for licenses authorizing operation and focused on instrumentation to detect degradation of the reactor coolant system pressure boundary, as well as on equipment or process variables that affect the integrity of fission product barriers during design-basis accidents (DBAs) or transients. The fourth criterion refers to the use of operating experience and probabilistic risk assessment to identify, and include in the TS, those structures, systems, and components shown to be significant to public health and safety. These criteria, codified by a revision to 10 CFR 50.36 (60 FR 36953; July 19, 1995), are the source of the TS requirements for facilities licensed under 10 CFR Part 50. A general discussion of these considerations is provided below.

Criterion 1 at 10 CFR 50.36(c)(2)(ii)(A) states that TS LCOs must be established for "installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary." Since the VY facility no longer has fuel in the reactor and is no longer licensed to operate, this criterion is not applicable.

Criterion 2 at 10 CFR 50.36(c)(2)(ii)(B) states that TS LCOs must be established for a "process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." The purpose of this criterion is to capture those process variables that have initial values assumed in the DBA and transient analyses, and which are monitored and controlled during power operation. Since the VY facility no longer has fuel in the reactor vessel and is no longer licensed to operate, this criterion is not applicable.

Criterion 3 at 10 CFR 50.36(c)(2)(ii)(C) states that TS LCOs must be established for “structures, systems, or components that are part of the primary success path and which function or actuate to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.” The intent of this criterion is to capture into the TS those structures, systems, and components that are part of the primary success path of a safety sequence analysis. The primary success path of a safety sequence analysis consists of combinations and sequences of equipment needed to operate (including consideration of the single failure criterion), so that the plant response to DBAs and transients limits the consequences of these events to within the appropriate acceptance criteria. Since fuel will have been removed from the reactor vessel and spent fuel pool at the VY facility prior to implementation of this amendment, this criterion is not applicable.

Criterion 4 at 10 CFR 50.36(c)(2)(ii)(D) states that TS LCOs must be established for structures, systems, and components which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. The intent of this criterion is that risk insights and operating experience be factored into the establishment of appropriate TS LCOs. Since fuel will have been removed from the reactor vessel and spent fuel pool at the VY facility prior to implementation of this amendment, this criterion is not applicable.

10 CFR 50.36(c)(6), “Decommissioning,” applies to nuclear power reactor facilities (like VY) that have submitted the certifications required by 10 CFR 50.82(a)(1). For such facilities, TS involving safety limits, limiting safety system settings, and limiting control system settings; limiting conditions for operation; surveillance requirements; design features; and administrative controls are to be developed on a case-by-case basis.

10 CFR 50.36(c)(5), “Administrative controls,” states that administrative controls “are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.” The particular administrative controls to be included in the TS, therefore, are the provisions that the Commission deems essential for the safe operation of the facility that are not already covered by other regulations. Accordingly, the NRC staff has determined (see discussion on NRC Administrative Letter (AL) 95-06, “Relocation of Technical Specification Administrative Controls Related to Quality Assurance” (Reference 3) below), that administrative control requirements that are not specifically identified under Section 50.36(c)(5), and are not otherwise necessary to obviate the possibility of an abnormal situation or an event giving rise to an immediate threat to the public health and safety, may be relocated to more appropriate documents (e.g., the Quality Assurance (QA) Program, Licensee Controlled Procedure (LCP), Physical Security Plan (PSP), or Emergency Plan (EP)), which are subject to their own regulatory controls, such as 10 CFR 50.54(a) for QA programs and 10 CFR 50.59, “Changes, tests, and experiments.” Similarly, while the required content of TS administrative controls is specified in 10 CFR 50.36(c)(5), the particular details of these controls may be relocated to other licensee-controlled documents, where the 10 CFR 50.59 change evaluation process ensures that adequate regulatory controls are in place.

The regulations in 10 CFR Part 50, Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants,” establish requirements for NRC-approved QA plans; a

QA program change control process is established in 10 CFR 50.54(a). NRC Administrative Letter (AL) 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance" (Reference 3), provides guidance to licensees requesting amendments that relocate administrative controls to NRC-approved QA program descriptions, where subsequent changes are controlled pursuant to 10 CFR 50.54(a). NRC AL 95-06 provides specific guidance in the areas of: (1) independent safety engineering groups, (2) reviews and audits, (3) procedure review process, and (4) records and record retention. Some of the TS relocations requested by ENO as part of the establishment of ISFSI-Only TS for VY are specifically discussed in AL 95-06, while others are similar in nature to those discussed in the AL. Relocations not specifically discussed in AL 95-06 are evaluated with respect to the appropriateness of the relocation.

In addition, AL 95-06 states that for the procedure review process, relocation should be to a QA plan that contains a commitment to process procedures and procedure changes in accordance with an accepted technical standard. The NRC staff determined that relocation of site-specific TS requirements regarding the establishment, implementation and maintenance of procedures to the QA plan remains acceptable because the change control process of 10 CFR 50.54(a) will still govern any future changes to these requirements, as described in AL 95-06.

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 application dated July 20, 2017.

3.1 Background

VY has been shut down since December 2014. ENO submitted certifications for permanent cessation of reactor operations at VY and permanent removal of fuel from the VY reactor vessel on January 12, 2015. ENO is authorized to possess and store irradiated nuclear fuel at the permanently shutdown and defueled VY facility. After the VY reactor was shut down, all fuel assemblies were removed from the reactor vessel and placed in the VY SFP. The licensee is currently in the process of transferring all of the remaining spent nuclear fuel from the VY SFP to the onsite ISFSI. After all the irradiated fuel has been transferred from the SFP to the VY ISFSI, many of the requirements in the current PDTS are inapplicable or are no longer appropriate. The licensee has proposed multiple changes to the VY TS to reflect this change in the status of spent fuel storage, which is expected to occur before the end of 2018.

In its application dated July 20, 2017, ENO requested that the NRC review and approve the proposed ISFSI-Only TS for VY. The proposed amendment would modify the VY Operating License and PDTS to comport to the condition of all irradiated fuel being in dry storage within the onsite ISFSI at VY, using casks certified for use under a general license issued in 10 CFR 72.210. The amendment would also revise the VY PDTS to eliminate operational requirements and 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 the ISFSI. A new PDTS design requirement is proposed to prohibit storage of spent fuel in the SFP. This is to align the proposed license amendment with the proposed VY ISFSI-only Emergency Plan and the proposed VY ISFSI-only Physical Security Plan, which are predicated on completion of the

offload of spent fuel from the SFP and transfer to the ISFSI. The proposed changes to the PDTS also involve relocating administrative controls from Section 6.0, Administrative Controls, to the VY QAPM, and subsequently controlling them in accordance with 10 CFR 50.54(a). This relocation is being proposed in accordance with the recommendations and guidance contained in NRC Administrative Letter 95-06.

The existing VY 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 in excess of 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 ISFSI, all remaining SFP LCOs (and associated SRs) will no longer be applicable and are being proposed for deletion by the licensee. The ISFSI-Only TS being proposed reflect the prior removal of all spent fuel from the SFP. The proposed changes will result in ISFSI-Only TS that will be applicable to VY after the last spent fuel assembly has been removed from the SFP and placed within the ISFSI. This amendment is proposed to be implemented within 60 days following ENO's notification to the NRC that all spent fuel assemblies have been transferred out of the SFP and placed in dry storage within the ISFSI, and implementation of the approved amendment is predicated on this condition.

3.2 Facility Operating License Changes

License Finding h

The licensee has proposed to delete License Finding h, which is the previous NRC finding related to actions for management of aging on the functionality of structures and components identified during the VY license renewal process, as no longer applicable.

The purpose of the aging management program was, in part, to ensure that aging effects of equipment important to safe operation of the reactor are managed so that the functionality of safety-related structures, systems, and components (SSCs) was maintained during the facility's period of extended operation. For a permanently-shutdown facility, most of the equipment subject to aging management programs is no longer in use, and the functionality of that equipment does not need to be maintained. However, during decommissioning, some equipment functionality, such as for equipment related to the fire protection system, may be required after the permanent cessation of operations and therefore may be subject to an aging management program. Subsequent to permanent defueling of the reactor, VY license commitments for aging management were incorporated into Section 7, "Aging Management," of the Defueled Safety Analysis Report (DSAR). Changes to these license renewal commitments will continue to be evaluated pursuant to the criteria in 10 CFR 50.59.

Since the VY facility has been permanently shut down, most of the equipment subject to aging management programs is no longer required and is not in use. The remaining equipment that is required during decommissioning is now subject to an aging management program that has

been incorporated into the DSAR. Therefore, the NRC staff finds that the removal of License Finding h related to aging management commitments is acceptable.

License Condition 3.C

The licensee has proposed to delete the requirements in the Technical Specifications to make reports. The proposed changes to the PDTS would not contain reporting requirements because the administrative controls for reporting requirements would be deleted or relocated to the QAPM. Accordingly, this proposed change is administrative in nature. The NRC staff has evaluated this change and finds that the removal of this license condition is acceptable.

License Condition 3.E.10

The licensee has proposed to remove the reference to “plant operation” with respect to the requirements to submit an annual report to the Massachusetts Department of Public Health and the Metropolitan District Commission for radioactive materials released to the Connecticut River. This is an editorial change only. The report would continue to be submitted each year, stating the total quantities of radioactive materials released to the Connecticut River during the previous calendar year, therefore the NRC staff finds this change acceptable.

License Condition 3.E.13

The licensee has proposed to delete this License Condition, which involved the establishment and maintenance of a system of emergency notification to the states of Vermont and New Hampshire and the Commonwealth of Massachusetts. This equipment is not relied upon by the current VY ISFSI-only Emergency Plan (ADAMS Accession No. ML18053A112) and the current VY ISFSI-only Physical Security Plan (ADAMS Accession No. ML18165A423). The change deletes this condition in its entirety in order to comport with the currently approved plans for the VY ISFSI-only configuration. Since the emergency notification system is no longer required by the current emergency and physical security plans, as approved by the NRC, the NRC staff finds the deletion of this license condition acceptable.

License Condition 3.N

The licensee has proposed to delete, as no longer applicable, the license condition regarding mitigation strategies for large fires and explosions. The licensee has proposed to delete this license condition in its entirety. The license condition incorporated the requirements for mitigation strategies found in Section B.5.b of the Interim Compensatory Measures (ICM) Order EA-02-026 dated February 25, 2002 (ADAMS Accession No. ML020510305). Subsequently, 10 CFR 50.54(hh)(2) became effective on May 26, 2009. As stated in § 50.54(hh)(3), this section of the regulations does not apply to a permanently defueled reactor for which the certifications required under § 50.82(a) regarding the permanent cessation of operations and permanent removal of fuel from the reactor vessel; those certifications have been submitted for VY (ADAMS Accession No. ML15013A426). Further, by letter dated November 28, 2011 (ADAMS Accession No. ML111220447), the NRC rescinded Item B.5.b of the ICM Order. Therefore, neither the ICM Order nor § 50.54(hh) continue to apply to VY. On this basis, the NRC staff finds the deletion of this license condition acceptable.

Licensing Condition 3.P

The licensee has proposed to delete, as no longer required, the license renewal commitments included as information in the VY Updated Final Safety Analysis Report (UFSAR). The licensee has proposed to delete this license condition in its entirety. This license condition involves the management of commitments made for license renewal. As discussed above, the purpose of aging management programs is, in part, to ensure that aging effects of equipment important to safe operation of the reactor are managed so that the functionality of SSCs is maintained during the facility's period of extended operation. For a permanently shutdown facility, most of the equipment subject to aging management programs is no longer in use and its functionality does not need to be maintained. However, during decommissioning, some equipment functionality, such as for 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. VY license renewal commitments for aging management are located in Section 7, "Aging Management," of the Defueled Safety Analysis Report (DSAR), as updated in accordance with 10 CFR 50.71(e). Therefore, changes to these license renewal commitments will continue to be evaluated pursuant to the criteria in 10 CFR 50.59. In addition, the spent fuel storage cask systems in the ISFSI are subject to the requirements of their own Certificate of Compliance and associated Technical Specifications. On this basis, the NRC staff finds the deletion of this license condition acceptable.

3.3 Technical Specification Changes

Section 1.0

The licensee has proposed to delete in its entirety, as no longer needed, Section 1.0, "Definitions," which defines terms that are proposed to be deleted or relocated from the PDTS. The purpose of the definitions is to provide uniform interpretation of frequently used terms in the PDTS. The proposed changes to other PDTS sections either eliminate or relocate the information that references these terms. 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 that it will not impact the continued safe storage and maintenance of spent fuel in the ISFSI. The NRC staff therefore finds it is acceptable to delete this section in its entirety.

Sections 3.0/4.0

The licensee has proposed to delete in their entirety Sections 3.0/4.0, "Limiting Conditions of Operation and Surveillance Requirement (SR) Applicability," which provides general requirements applicable to all SRs, since all existing PDTS to which they apply are being proposed for deletion. Since the associated TS are being deleted, the NRC staff finds that the proposed deletion of PDTS Sections 3.0/4.0 is administrative in nature, will have no impact on the continued safe storage and maintenance of spent fuel in the VY ISFSI, and is therefore acceptable.

The licensee has proposed to relocate the requirements of Sections 3.1/4.1, "Radioactive Effluents" to a licensee-controlled procedure because the requirements of these sections apply to the release of radioactive effluents from the facility and do not satisfy any of the four criteria in 10 CFR 50.36(c)(2)(ii) requiring establishment of LCOs. The licensee would move them to the procedure that tests liquid waste effluents and is subject to the requirements of 10 CFR 50.59; Appendix B to 10 CFR Part 50; and the requirements to assure radioactive effluent doses are maintained "as low as reasonably achievable" in accordance with Appendix I to 10 CFR Part 50, and do not exceed the dose limits to members of the public specified in 10 CFR Part 20 and other applicable regulations. Maintaining the relocated requirements in a procedure subject to the change control process in 10 CFR 50.59 and other NRC-approved change control mechanisms and dose requirements, provides adequate control, and has no impact on continued safe storage of spent fuel in the ISFSI. Therefore, the NRC staff finds these changes acceptable.

The licensee has proposed to delete in their entirety Sections 3.2/4.2, "Spent Fuel Storage," which apply to spent fuel stored in the SFP. The requirements in this section are related to assuring the functional capability of equipment required for safe storage and maintenance of spent fuel stored in the SFP. As described by the licensee, PDS 3.2.A/4.2.A and 3.2.B/4.2.B do not apply when there are no fuel assemblies stored in the SFP. Therefore, these PDS would no longer be needed following the transfer of all spent fuel assemblies from the SFP to the ISFSI. The NRC staff finds that these PDS may be deleted in their entirety with no impact on continued safe storage and maintenance of irradiated fuel in an ISFSI. Therefore, this change is acceptable.

Section 5.0

The licensee has proposed to modify Section 5.0, "Design Features," that describes the site locations and requirements for storage of spent nuclear fuel, to reflect the condition of a permanently defueled reactor and permanent removal of spent fuel from the SFP. PDS Section 5.0 provides a description of the VY site location. This section is proposed to be revised to reflect the permanently defueled condition of the facility with all fuel assemblies stored within the ISFSI. The revised Section 5.0 would provide an adequate level of detail to describe design features and site location. Specifically, a description regarding the minimum distance from the center line of the reactor containment to the site exclusion radius is proposed for deletion. This distance is based on requirements contained in 10 CFR 100.3 regarding reactor accident dose analyses. Because the VY 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel, this design feature description is no longer needed. The reference to the site plan drawing that defines the exclusion area boundary, boundary for gaseous effluents, boundary for liquid effluents, as well as areas defined per 10 CFR 20 as "controlled areas" and "unrestricted areas" is proposed to be deleted because the information is more detailed than required to describe the VY site with a defueled reactor and SFP. Further, the description of licensee authority on the property references the exclusion area defined in § 100.3, which is no longer needed, and does not describe a site location design feature with the reactor permanently defueled. In addition, descriptions of design features associated with fuel storage in the SFP, after all spent fuel has been removed from the SFP, are no longer applicable and are proposed to be deleted. A new

design feature for the SFP is proposed, which would state that spent fuel shall not be stored in the SFP. This description reflects the condition upon which this proposed amendment is predicated. The NRC staff finds that the removal or change of these design feature descriptions do not alter any regulatory requirements related to licensee authority over the site location, and do not have an impact on the continued safe storage and maintenance of spent fuel in the VY ISFSI, and are therefore acceptable.

Section 6.0

The licensee has proposed to make certain modifications and deletions to Section 6.0, "Administrative Controls," to conform to other proposed changes and the condition of all spent fuel being stored within the ISFSI. Section 6.0 describes the organization and responsibilities for the site, as well as programs and procedures. The licensee proposed to relocate the majority of this section from the PDTS to the VY QAPM, with the exception of Section 6.5, "High Radiation Area," which will be retained in the PDTS. Administrative controls proposed to be relocated to the VY QAPM are as shown in Attachment 4 to a July 20, 2017 license amendment request (ADAMS Accession No. ML17206A200).

The licensee has proposed to delete PDTS Sections 6.1.A and 6.1.B from the PDTS and relocate them to the VY QAPM administrative controls verbatim with the exception that references to the "plant manager" position will be revised to "manager responsible for overall operational activities" in order to conform to the description of the corresponding management position in Section A, "Management," of the existing VY QAPM. PDTS Sections 6.1.A and 6.1.B provide a description and requirements regarding certain key operational management responsibilities. This does not change any requirements, qualifications, or responsibilities of the individual in this position, and is strictly an administrative change. This change is consistent with previously approved changes to the position titles in the TS to allow facility specific titles to be identified in licensee-controlled documents such as the QAPM (ADAMS Accession No. ML030570728).

NRC Administrative Letter 95-06 (Reference 3) provides a discussion concerning the relocation of Technical Specification administrative controls to a quality assurance (QA) program. The relocation of these requirements to the quality assurance program are considered acceptable because of the controls imposed by Appendix B to 10 CFR Part 50, the existence of an NRC approved quality assurance program, and because of the quality assurance program change control process in § 50.54(a). When these administrative controls are incorporated into the VY QAPM, any future changes would be controlled in accordance with § 50.54(a). This provides adequate administrative controls for the facility when all spent fuel is located within the ISFSI.

The licensee proposes to eliminate PDTS 6.1.C that requires the shift supervisor to be responsible for the shift command function. As described in the existing PDTS 6.2.B, the shift command function is focused on operations involving the storage or movement of spent nuclear fuel within the SFP. After all of the 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. The position of shift supervisor described in TS 6.1.C is a holdover from the control room function of supervising multiple functions of an operating nuclear power plant. With the limited requirements for supervision of the passive dry fuel storage system in the ISFSI or with respect

to decommissioning of the former power generation facility, the shift supervisor position and shift command function are no longer required.

The licensee proposes to delete PDTS Section 6.2.A from the PDTS and relocate the basic administrative controls from this section to the VY QAPM administrative controls, without altering the basic administrative controls. The administrative controls describe organizational lines of authority, responsibilities, and requirements for organizational freedom, for certain personnel, including those performing health physics or quality assurance functions, such that those personnel are provided sufficient organizational freedom. Providing onsite and offsite organization descriptions in the QAPM is consistent with NRC Administrative Letter 95-06 (Reference 6), which provides a discussion concerning the relocation of TS administrative controls to a QA program. The NRC considers relocating these requirements to the quality assurance program to be acceptable because of the controls imposed by Appendix B to 10 CFR Part 50, the existence of an NRC approved quality assurance program, and the quality assurance program change control process in § 50.54(a). After these administrative controls are incorporated into the VY QAPM, any future changes would be controlled in accordance with § 50.54(a). This will provide adequate control for the facility when all spent fuel is located within the ISFSI.

The licensee proposes that the administrative controls provided in the existing PDTS 6.2.A be incorporated verbatim in the VY QAPM, with the following exceptions:

- 1) The licensee proposes to make an administrative change to PDTS 6.2.A.1 to delete references to "Technical Specifications" and the "Technical Requirements Manual" (TRM). This is an administrative change, because once the requirements are incorporated into the QAPM these references would no longer be valid. Since the reference to the TRM is unnecessary, and this change is consistent with previously approved changes to the TS to allow facility specific titles to be identified in licensee-controlled documents such as the QAPM, it is acceptable.
- 2) The licensee proposes to revise the PDTS 6.2.A.2 reference to "plant manager" to "manager responsible for overall operational activities" in order to conform to the description of the corresponding management position in Section A, "Management," of the existing VY QAPM. This does not change any requirements, qualifications, or responsibilities of the individual in this position, and is strictly an administrative change. Since this change is administrative and consistent with previously approved changes to the position titles in the TS to allow facility specific titles to be identified in licensee-controlled documents such as the QAPM, it is acceptable.
- 3) The licensee proposes to not incorporate into the QAPM the QAPM PDTS 6.2.A.4 reference to individuals who "train the Certified Fuel Handlers.". After all fuel is stored within the ISFSI, and storage of spent fuel in the SFP is prohibited, there would no longer be an organizational need for Certified Fuel Handlers or the associated training program. Since this change is administrative in nature and will have no impact on the continued safe storage and maintenance of spent fuel located in the ISFSI, it is acceptable.

The licensee proposes to delete PDTS 6.2.B in its entirety, and to not relocate these requirements to the QAPM. These administrative controls pertain to the facility staff organization and requirements when spent fuel is stored or moved within the SFP. Once all spent fuel is located within the ISFSI and spent fuel storage in the SFP is prohibited, it would not be necessary for the QAPM to include these administrative controls. The deletion of TS 6.2.B after the fuel has been moved from the spent fuel pool to the ISFSI will have no impact on safe storage and maintenance of spent fuel in the ISFSI, and is therefore acceptable.

The licensee proposes to relocate PDTS 6.2.C.1 verbatim to the QAPM administrative controls. NRC Administrative Letter 95-06 (Reference 6) provides a discussion concerning the relocation of Technical Specification administrative controls to a quality assurance (QA) program. The NRC considers relocating administrative control requirements to the quality assurance program acceptable, because of the controls imposed by Appendix B to 10 CFR Part 50, the existence of an NRC approved quality assurance program, and the quality assurance program change control process in § 50.54(a). After these administrative controls are incorporated into the VY QAPM, any future changes will be controlled in accordance with § 50.54(a). This will provide adequate control for the facility when all spent fuel is located in the ISFSI. Since providing the requirements for facility staff qualifications in the QAPM is consistent with Administrative Letter 95-06, and will have no impact on safe storage and maintenance of spent fuel in the ISFSI, the NRC staff considers the proposed relocation of these requirements to the QAPM to be acceptable.

The licensee proposes to delete PDTS 6.2.C.2 which specifies that Certified Fuel Handler training programs shall be maintained. As described in PDTS 6.2.B, when spent fuel is stored or moved within the SFP a Certified Fuel Handler is required to perform shift supervision. This shift command function is focused on operations involving the storage or movement of spent nuclear fuel within the SFP. Following the transfer of all spent fuel to the ISFSI, storage of spent fuel in the SFP will be prohibited; accordingly, there will no longer be a need for Certified Fuel Handlers or the associated training programs. On this basis, the NRC staff finds that this proposed deletion will have no impact on safe storage and maintenance of spent fuel in the ISFSI, and is acceptable.

The licensee proposes to delete PDTS 6.4, which requires written procedures to be established, implemented, and maintained for certain activities. PDTS 6.4 would be relocated to the VY QAPM administrative controls section in its entirety. However, PDTS 6.4.B, which involves requiring written procedures for fuel handling operations in the SPF, will be deleted in its entirety. As discussed above, following the transfer of the spent fuel to the ISFSI, the proposed change to PDTS 5.2 would prohibit the storage of spent fuel in the SFP thus eliminating the need for procedures for fuel handling operations in the SPF. Further, after the administrative controls are incorporated into the VY QAPM, any future changes to those controls would be controlled in accordance with § 50.54(a). This will provide adequate control for the facility once all spent fuel is located in the ISFSI. The NRC staff finds that the relocation of administrative controls for procedures to the QAPM is consistent with NRC Administrative Letter 95-06 (Reference 6) and will have no impact on safe storage and maintenance of spent fuel in the ISFSI, and is therefore acceptable.

The licensee proposes to make an administrative change to PDTS 6.5, which provides the controls that shall be applied to high radiation areas, to correct a typographical error. The proposed change is to replace with word “does” with the word “dose” in PDTS Section 6.5.A.4.d.1. PDTS 6.5 will remain in the PDTS, and there are no proposed changes associated with those controls. Since this is an editorial change to correct a typographical error, the NRC staff finds this change acceptable.

The licensee proposes to delete PDTS 6.6, which concerns reporting requirements, from the PDTS in its entirety and relocate it verbatim to the QAPM. After these administrative controls are incorporated into the QAPM, any future changes to them would be controlled in accordance with § 50.54(a). This will provide adequate control for the facility when all spent fuel is located in the ISFSI. Since the relocation of administrative controls for reporting requirements to the QAPM is consistent with NRC Administrative Letter 95-06 (Reference 6) and will have no impact on safe storage and maintenance of spent fuel located in the ISFSI, the NRC staff finds this change acceptable.

The licensee proposes to make changes to certain sections of PDTS 6.7. PDTS 6.7 requires the establishment, implementation and maintenance of specified programs and manuals. Specifically, the licensee proposes to delete PDTS 6.7.B, which specifies how to document, review, and approve changes to the Off-site Dose Calculation Manual (ODCM). The licensee proposes to relocate these requirements verbatim to the QAPM with the following exceptions:

- 1) References to Specification 6.6.D and Specification 6.6.E, which describe the requirement for the Radioactive Effluent Release Report and the Annual Radiological Environmental Operating Report respectively, would be deleted. This would be an administrative change, since these specifications would no longer reside in the PDTS once relocated to QAPM, and the references to those sections of the PDTS would not be necessary to describe the administrative requirements for those reports.
- 2) A reference to the “plant manager” position would be revised to “manager responsible for overall operational activities” in order to conform to the description of the corresponding management position in Section A, “Management,” of the existing QAPM. This would not change any requirements, qualifications, or responsibilities of the individual in this position, and is strictly an administrative change. This change is consistent with previously approved changes to the position titles in the TS to allow facility specific titles to be identified in licensee-controlled documents such as the QAPM (Reference 16).

The licensee proposes to delete TS 6.7.D, which specifies administrative requirements for the program to control radioactive effluents and for maintaining doses to the public to within the specified limits from the PDTS, and relocate the requirements to the QAPM with the following exceptions:

- 1) References to iodine-131 and iodine-133 in PDTS sections 6.7.D.g.2 and 6.7.D.i would be deleted and would not be relocated to the QAPM. This is due to the radioactive decay and short half-lives of those radioisotopes (approximately 8 days and 20.83 hours, respectively) and the time that has passed since permanent cessation of reactor

operation. This is consistent with changes to the ODCM implemented under 10 CFR 50.59.

- 2) PDTS sections 6.7.D.g.1 and 6.7.D.h would be deleted and not be relocated to the QAPM, since after spent fuel is contained within dry storage casks and transferred to the ISFSI there would no longer be a need to monitor for noble gases released from the facility as any releases from the spent fuel would be contained in the spent fuel dry storage canisters.

Since the relocation of these dose requirements to the QAPM, and the deletion of the specified requirements, is consistent with NRC Administrative Letter 95-06 (Reference 6) and will have no impact on safe storage and maintenance of spent fuel located in the ISFSI, the NRC staff finds this change acceptable.

The licensee has proposed to delete PDTS 6.7.E, which describes the TS Bases Control Program, in its entirety from the PDTS. As described in the licensee's submittal of July 20, 2017, all of the Bases in the existing PDTS are being deleted with the proposed changes to the corresponding sections. Since all the Bases would be deleted, there would no longer be a need for a TS Bases control program, and it would not be incorporated into the QAPM. After the administrative controls are incorporated into the QAPM, any future changes would be controlled in accordance with § 50.54(a). This would provide adequate control for the facility when all spent fuel is located in the ISFSI. The NRC staff finds that the proposed deletion of TS 6.7.E and the relocation of those administrative requirements to the QAPM would be consistent with NRC Administrative Letter 95-06 (Reference 6) and would have no impact on safe storage and maintenance of spent fuel located in the ISFSI, and is therefore acceptable.

3.4 Other Administrative Changes

In addition to the changes described above, the licensee has also proposed several other administrative changes to the license and PDTS.

- 1) The licensee has proposed to re-format pages in the operating license to remove references to license condition paragraphs deleted by previously issued amendments in order to consolidate the remaining paragraphs.
- 2) The licensee has also proposed to make editorial changes to the operating license and PDTS to remove unnecessary references to paragraphs deleted by these proposed changes or previously issued amendments, and to reformat and consolidate the remaining sections and paragraphs. These changes are as shown in the markup provided in Attachment 2, and retyped pages provided in Attachment 3, of the July 20, 2017 request submittal.
- 3) The licensee has also proposed to change the cover page for Appendix A to the Technical Specifications (TS) to delete reference to "Bases." This is an administrative and conforming change to reflect the proposed changes to the PDTS. Deletions of the "Bases" are shown in Attachment 2 of the July 20, 2017 request submittal. With there no longer being any "Bases" remaining in the PDTS, the TS Bases Control Program in TS

6.7.E is also proposed to be deleted. Therefore, the reference to “Bases” on the cover page is no longer needed.

- 4) Finally, the licensee has proposed to make an administrative change to the PDTS “Table of Contents” to reflect the elimination of sections associated with these proposed changes to the PDTS and previously issued amendments, as well as repagination of remaining sections. This is an editorial change and is shown in Attachments 2 and 3 of the July 20, 2017 request submittal.

The NRC staff finds that the changes listed above are all administrative or editorial in nature and would have no impact on the safe storage and maintenance of spent fuel in the ISFSI, and are therefore acceptable.

3.5 Conclusion

Based on the NRC staff’s review of the VY ISFSI-Only TS, as described above, the NRC staff concludes that the requirements of 10 CFR 50.36 are addressed in a satisfactory manner, considering the permanently shutdown and defueled status of the facility, and the proposed transfer of all remaining spent fuel from the VY SFP to the ISFSI by 2018.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments to the VY 10 CFR Part 50 facility operating license and TS include 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 amendments involve no significant hazards consideration, which was published in the Federal Register on September 26, 2017 (82 FR 44847), and there have been no public comments on this finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22 (c)(9) and (c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 STATE CONSULTATION

On June 25, 2018, the NRC staff notified the Vermont State Liaison Officer to the NRC, Ms. June Tierney, Commissioner, Vermont Dept. of Public Service, regarding the proposed changes to the VY License and Technical Specifications to reflect the transfer of all spent fuel into dry cask storage at the onsite ISFSI, and the NRC staff’s intent to approve the VY ISFSI-only license changes and TS revisions via license amendments. The Vermont State Liaison Officer had no response.

6.0 CONCLUSION

Based on its review of the licensee's application of July 20, 2017 and its proposed changes to the VY Renewed Operating Licenses and PDTS to reflect the removal of all spent nuclear fuel from the VY spent fuel pool and transfer to dry cask storage in an onsite ISFSI, and the proposed VY ISFSI-Only TS, the NRC staff finds that the proposed changes meet the standards in 10 CFR 50.36. Further, the changes proposed by this license amendment request will delete requirements that will no longer be applicable following the transfer of all spent nuclear fuel to the VY ISFSI, as well as relocate administrative controls to licensee-controlled programs in a manner consistent with NRC Administrative Letter 95-06. On the basis of 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 VY ISFSI-Only Technical Specifications, as described in its letter dated July 20, 2017, 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

- 1) NRC Final Rule, "Technical Specification for Facility Licenses; Safety Analysis Reports," dated December 17, 1968 (33 FR 18610).
- 2) NRC Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 22, 1993 (58 FR 39132).
- 3) NRC Administrative Letter 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance," dated December 12, 1995 (ADAMS Legacy Library No. 9512060318).

Principal Contributor: Jack D. Parrott, NMSS

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