

March 6, 1998

Mr. Donald A. Reid
Senior Vice President, Operations
Vermont Yankee Nuclear Power Corporation
185 Old Ferry Road
Brattleboro, VT 05301

SUBJECT: ISSUANCE OF AMENDMENT NO. 154 TO FACILITY OPERATING LICENSE
NO. DPR-28, VERMONT YANKEE NUCLEAR POWER STATION (TAC NO.
M99455)

The Commission has issued the enclosed Amendment No. 154 to Facility Operating License DPR-28 Vermont Yankee Nuclear Power Station. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated August 22, 1997, as supplemented by letter dated September 18, 1997, and October 31, 1997. The October 31, 1997, letter did not effect the original no significant hazards consideration.

The amendment revises the TSs Sections 3.13/4.13 to address the new low pressure CO₂ fire suppression system for the East and West Switchgear Rooms and to more clearly describe the separation of the rooms into two separate fire areas.

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by

Richard P. Croteau, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures: 1. Amendment No. 154 to License No. DPR-28
2. Safety Evaluation

cc w/ encls: See next page

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See attached

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***PREVIOUS CONCURRENCE**

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D. Reid

Vermont Yankee Nuclear Power Station

cc:

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DATED: March 6, 1998

AMENDMENT NO154 TO FACILITY OPERATING LICENSE NO. DPR-28 VERMONT
YANKEE NUCLEAR POWER STATION

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

VERMONT YANKEE NUCLEAR POWER CORPORATION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 154
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Vermont Yankee Nuclear Power Corporation (the licensee) dated August 22, 1997, as supplemented by letter dated September 18, 1997, and October 31, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-28 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 154 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance, to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Cecil O. Thomas, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: March 6, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 154

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

245

252

Insert

245

252

3.13 LIMITING CONDITIONS FOR OPERATION

D. CO₂ Systems

1. Except as specified in Specification 3.13.D.2, the CO₂ systems located in the cable vault, east and west switchgear rooms, and diesel fire pump day tank room shall be operable, whenever equipment in the area protected by the system is required to be operable.
2. From and after the date that the CO₂ system in the cable vault or a switchgear room is inoperable, within one hour a fire watch shall be established to inspect the location at least once every hour, provided that the fire detection system is operable in accordance with 3.13.A. If the fire detection system is also inoperable, within one hour a continuous fire watch shall be established with backup fire suppression equipment. Restore the CO₂ system to operable status within 14 days or submit a report within the next 30 days to the Commission as specified in 6.7.C.2 outlining the cause of inoperability and the plans for restoring the CO₂ system to operable status.

4.13 SURVEILLANCE REQUIREMENTS

- e. At least once per 3 years, partially open hose station valves to verify valve operability and no blockage.

D. CO₂ Systems

1. The CO₂ systems located in the cable vault, east and west switchgear rooms, and diesel fire pump day tank room shall be demonstrated operable.
 - a. At least once per six months by verifying each CO₂ cylinder associated with the cable vault and diesel fire pump day tank room CO₂ systems does not contain less than 90% of its initial charge.
 - b. At least once per 18 months by verifying that the system, including associated ventilation dampers, will actuate automatically to a simulated actuation signal.
 - c. At least once per operating cycle a flow path test shall be performed to verify flow through each nozzle.
 - d. At least once per 7 days by verifying the CO₂ storage tank associated with the switchgear rooms does not contain less than 50% level and a minimum pressure of 270 psig.

BASES:3.13 & 4.13 FIRE PROTECTION SYSTEMS

On May 11, 1976, Vermont Yankee received a letter from the NRC requesting that an in-depth evaluation of the existing fire protection systems be performed using Branch Technical Position (BTP) APCSB 9.5-1 as a guide. Concurrent with this evaluation a fire hazards analysis of the entire plant complex was required. In an effort to clarify the BTP an Appendix A was subsequently issued to specifically address operating plants. Enclosed with this Appendix the NRC requested that proposed Technical Specifications on fire protection also be submitted. The subject section 3.13/4.13 and the following specific bases are those specifications evolving from these efforts.

- A. The smoke, heat and flame detectors provide the early warning fire detection capability necessary to detect problems in vital areas of the plant. Surveillance requirements assure these sensors and their associated instruments to be operable. When the equipment protected by the detectors is not required to be operable, specifications covering the sensors and instruments do not apply.

B,C, The Vital Fire Suppression Water System, CO₂ systems, sprinkler D,F, systems and foam systems specifications are provided to meet and pre-established levels of system operability in the event of a fire. These systems provide the necessary protection to assure safe reactor shutdown. Periodic surveillance testing provides assurance that vital fire suppression systems are operable.

The east and west switchgear rooms low pressure CO₂ storage tank Technical Specification minimum level of 50% provides for sufficient CO₂ quantity to achieve and maintain design concentration, in accordance with NFPA 12 (1993), in the east or west switchgear rooms. The Technical Specification minimum tank pressure of 270 psig will provide the minimum pressure to meet system design.

- E. Vital fire barrier penetration fire seals are provided to assure that the fire resistance rating of barriers is not reduced by a penetration. Surveillance inspections shall be performed to insure that the integrity of these seals is maintained.

The diesel fire pump has a design consumption rate of 18 gallons of fuel per hour; therefore, 150 gallons provides for greater than 8 hours of operation. Additional fuel can be delivered in about one hour and additional fuel is on site. When the equipment protected by the fire protection systems is not required to be operable, the specifications governing the fire protection system do not apply.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 154 TO FACILITY OPERATING LICENSE NO. DPR-28

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By letter dated August 22, 1997, as supplemented by letters dated September 18, 1997, October 31, 1997, the Vermont Yankee Nuclear Power Corporation (the licensee) submitted a request to amend the Vermont Yankee Nuclear Power Station Technical Specifications (TSs). The proposed amendment would revise the TSs to address the new low pressure CO₂ fire suppression system for the East and West Switchgear Rooms and to more clearly describe the separation of the rooms into two separate fire areas. The October 31, 1997, submittal did not effect the original no significant hazards consideration.

2.0 EVALUATION

The proposed amendment provides for the use of a newly installed low pressure CO₂ fire suppression system for the East and West Switchgear Rooms. The new low pressure CO₂ system consists of a 6-ton storage tank, piping, valves, and associated instrumentation and controls. The proposed amendment would revise the applicable TSs limiting conditions for operation (LCO) and surveillance requirements to incorporate requirements appropriate for the new low pressure CO₂ system and remove requirements associated with the existing high pressure CO₂ system. The proposed values for minimum CO₂ storage tank level and pressure are based upon system design to achieve and maintain the design CO₂ concentration in either switchgear room. The low pressure fire suppression system will ensure that the affected switchgear room's fire suppression is sufficient to stop the spread of a fire in either the East or West Switchgear Room, as well as providing assurance that the safety related equipment in the unaffected rooms will remain functional to accomplish, if required, their intended safety functions. The new system will meet the CO₂ concentration requirements of National Fire Protection Association (NFPA) 12, "Carbon Dioxide Extinguishing Systems," following detection of a fire condition in one of the associated rooms.

The proposed amendment would also more clearly designate the East and West Switchgear Rooms as two separate fire areas. The two rooms are each provided with fire detection and suppression systems and are separated by a 1-hour fire barrier. The division of the switchgear room into two fire areas was accomplished by a 1982 plant design change. However, the TSs were not revised at that time to clearly indicate the division.

Based on its review, the NRC staff finds that the proposed amendment makes appropriate changes to reflect the installation of the low pressure CO₂ fire suppression system and reflect the East and West Switchgear Rooms as two separate fire areas, will have no adverse impact on safety and does not pose an undue risk to public health and safety. Therefore, it is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Vermont State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in 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, and there has been no public comment on such finding (62 FR 52590). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). 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 CONCLUSION

The Commission has concluded, 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.

Principal Contributor: Kahtan N. Jabbour

Date: March 6, 1998

March 6 1998

MEMORANDUM TO: BiWeekly Notice Coordinator

FROM: Richard P. Croteau, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II

SUBJECT: REQUEST FOR PUBLICATION IN BIWEEKLY FR NOTICE - NOTICE
OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING
LICENSE (TAC NO. M99455)

Vermont Yankee Nuclear Power Corporation, Docket No. 50-271, Vermont Yankee Nuclear
Power Station, Vernon, Vermont

Date of application for amendment: August 22, 1997, as supplemented by letter dated
September 18 and October 31, 1997.

Brief description of amendment: The amendment revises the Technical Specifications to
address the new low pressure CO2 suppression system for the East and West Switchgear
Rooms and more clearly describes the separation of the two rooms.

Date of Issuance: March 6, 1998

Effective date: As of the date of issuance, to be implemented within 30 days.

Amendment No.: 154

Facility Operating License No. DPR-28: Amendment revised the Technical Specifications.

Date of initial notice in FEDERAL REGISTER: October 8, 1997 (62 FR 52590). Information
provided by letter dated October 31, 1997, did not affect the original no significant hazards
consideration.

The Commission's related evaluation of this amendment is contained in a Safety Evaluation
dated March 6, 1998

No significant hazards consideration comments received: No.

Local Public Document Room location: Brooks Memorial Library, 224 Main Street,
Brattleboro, VT 05301

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~~REDACTED~~ K. Jabbour T. Clark
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