

AUG 21 1989

Docket No. 50-271

Vermont Yankee Nuclear Power Corporation  
ATTN: Mr. Warren P. Murphy  
Vice President and Manager  
of Operations  
RD 5, Box 169  
Ferry Road  
Brattleboro, Vermont 05301

Gentlemen:

Subject: Inspection 50-271/89-04

This refers to your letter dated June 16, 1989, in response to our letter dated May 18, 1989.

Your letter requests withdrawal of the violation pertaining to testing of CO2 systems. No new information was provided to the NRC in your response letter beyond that previously provided in support of Inspection 89-04. Section 1-7.3 of (1977) NFPA standard 12 specifies that tests be conducted to determine that the CO2 system will function as intended. Your staff had not performed tests that demonstrated that the CO2 systems would achieve a 50 percent concentration and maintain the concentration for ten minutes in the specified areas. Accordingly, we have concluded that the violation is valid.

We note your statement that NFPA Standard 12 does not specifically require a full discharge test. We agree that it does not specifically require a full discharge test; however, it does require that you demonstrate through a test that the system will function as intended. This means maintain the design concentration for the specified duration. To our present knowledge, no other test will demonstrate this fact. We will entertain an alternate to this established test if a conclusive test method can be designed.

It is our understanding, that pending your performing tests to establish that the CO2 systems will function as intended, a continuous fire watch is posted in the subject area in accordance with the requirements of the technical specification. Further, we understand that you plan to perform a full discharge test of the cable vault CO2 system as soon as practicable but no later than the end of the next scheduled outage.

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Vermont Yankee Nuclear  
Power Corporation

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Your cooperation with us is appreciated.

Sincerely,

Original Signed By:

Bruce A. Boger, Acting Director  
Division of Reactor Safety

cc: w/encl:

J. Weigand, President and Chief Executive Officer  
J. Pelletier, Plant Manager  
J. DeVincentis, Vice President, Yankee Atomic Electric Company  
R. Capstick, Licensing Engineer, Yankee Atomic Electric Company  
J. Gilroy, Director, Vermont Public Interest Research Group, Inc.  
G. Sterzinger, Commissioner, Vermont Department of Public Service  
P. Agnes, Assistant Secretary of Public Safety, Commonwealth of  
Massachusetts  
Public Document Room (PDR)  
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Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
State of New Hampshire  
State of Vermont  
Commonwealth of Massachusetts

bcc: w/encl:

Region I Docket Room (with concurrences)  
~~M. Perkins, DRMA (w/o encl)~~  
D. Haverkamp, DRP  
L. Doerflein, DRP  
J. Wiggins, DRP  
G. Grant, SRI - Vermont Yankee  
J. Macdonald, SRI - Yankee  
M. Fairtile, NRR  
K. Abraham, PAO (21) (SALP Reports Only)  
J. Dyer, EDO

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Anderson/rw  
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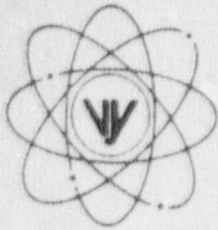
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# VERMONT YANKEE NUCLEAR POWER CORPORATION



Ferry Road, Brattleboro, VT 05301-7002

BVY 89-52

REPLY TO  
ENGINEERING OFFICE

580 MAIN STREET  
BOLTON, MA 01740  
(508) 779-6711

June 16, 1989

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Attention: Document Control Desk

References: a) License No. DPR-28 (Docket No. 50-271)  
b) Letter, USNRC to VYNPC, NVCY 89-108, dated 5/18/89  
c) Letter, VYNPC to USNRC, BVY 89-48, dated 6/2/89

Dear Sir:

Subject: Response to Inspection Report 89-04, Notice of Violation

During a routine safety inspection of Vermont Yankee's fire protection program conducted on March 20-23, 1989, a violation of NRC requirements was identified. Our response to this violation is provided below.

## VIOLATION

Technical Specification 3.13.D requires that the carbon dioxide fire suppression (CO<sub>2</sub>) systems located in the cable vault and diesel fire pump day tank room shall be operable whenever equipment in the area protected by the systems is required to be operable. The technical specifications require a continuous fire watch if the CO<sub>2</sub> system in the cable vault is inoperable and an hourly fire watch if the CO<sub>2</sub> system in the fire pump day tank room is inoperable.

In a letter to the NRC dated January 31, 1977, the licensee stated that the carbon dioxide systems at Vermont Yankee were designed to meet the requirements of the 1977 National Fire Protection Association (NFPA) Standard 12. NFPA Standard 12 Section 1-7.3 specifies that the installed carbon dioxide systems shall be tested and the tests performed shall be adequate to determine that the system has been properly installed and will function as intended. The CO<sub>2</sub> systems are designed to achieve a 50 percent concentration. In the cable vault, this concentration must be maintained for ten minutes.

Contrary to the above, as of April 21, 1989, the CO<sub>2</sub> systems in the cable vault and in the diesel fire pump day tank room had not been demonstrated to be operable, in that no tests had been performed of their capability to reach and maintain design concentrations of CO<sub>2</sub>, and the appropriate fire watches had not been implemented.

This is a Severity Level IV Violation (Supplement 1)

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RESPONSE

Following a careful review of the 1977 National Fire Protection Association (NFPA) Standard 12, we have found nothing to indicate that a Full Discharge Test is required. Based on that review, we disagree with the conclusion reached in the Inspection Report and, based on the following information, respectfully request that this Notice of Violation be withdrawn.

The Inspection Report specifies Section 1-7.3 of (1977) NFPA Standard 12 as the applicable section. It reads as follows:

"1-7.3 Approval of Installations. The completed system shall be tested by qualified personnel to meet the approval of the authority having jurisdiction. These tests shall be adequate to determine that the system has been properly installed and will function as intended. Only listed or approved equipment and devices shall be used in the systems."

We believe the initial testing, periodic inspection and maintenance described in Section 1-11.1 of NFPA Standard 12 is applicable since initial testing of the CO<sub>2</sub> system is at issue. Section 1-11.1 reads as follows:

"1-11.1 A manufacturer's test and maintenance procedure shall be provided to the owner for testing and maintenance of the system. The procedure shall provide for the initial testing of the equipment as well as for periodic inspection and maintenance."

Both of these sections are further explained in the Appendix A Explanatory. Of particular note is Section A-1-11.1 (Testing of Systems) of the (1977) NFPA Standard 12 which does not specifically require a full discharge test. Item 15 reads as follows:

"15. Test

- A. Puff test, minimum for acceptance.
- B. Full discharge test as required by owner.
- C. Full discharge test recommended when hydrostatic test is required."

In recent conversations with the NRC staff, we were told that the NRC is the "authority having jurisdiction" and that the NRC requires a full discharge test of the CO<sub>2</sub> systems in accordance with NFPA Standard 12, thus we are in violation of Section 1.7-3 of the Standard. We are unable to find a reference to support the staff position. We agree that had the NRC desired at that time of installation to fulfill into the role of "authority having jurisdiction," then certainly this role would have been fulfilled by NRC. However, at the time of acceptance testing, Vermont Yankee had no indication that the NRC intended to assume this role, thus we assumed the role of "authority having jurisdiction."

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Section A-1-11.1 of NFPA Standard 12 states that a puff test is the minimum for acceptance; which Vermont Yankee has performed. Further, the Standard indicates that a full discharge test is at the discretion of the owner. Since Vermont Yankee is the owner and has not required a full discharge test, this section was clearly met.

We have also reviewed later versions of NFPA Standard 12 and agree that, if the system were installed today, a full discharge test would be required. The difference in the 1977 code versus later code revisions, however, clearly demonstrates a change in requirements which further supports our contention that a full discharge test was not required to meet the 1977 code. Vermont Yankee has not been notified by the NRC of any changes to regulatory requirements that would necessitate our compliance to any version of the NFPA standards other than the 1977 NFPA Standard.

Although Vermont Yankee disagrees with the staff position regarding the interpretation of NFPA Standard 12, we have been responsive to NRC concerns. At significant cost to Vermont Yankee, we declared the subject CO<sub>2</sub> systems inoperable and established the appropriate fire watches. The Diesel Fire Pump Room CO<sub>2</sub> system full discharge test has been satisfactorily completed and the system was declared operable. A continuous fire watch is in place in the cable vault although the system remains functional. Complete compensatory measures were previously submitted in Vermont Yankee's Special 30-Day Report (Reference c).

The specific issue involved is whether Vermont Yankee has complied with the testing required for the applicable Fire Suppression Systems in accordance with the 1977 NFPA Standard 12. We firmly believe that we have met this standard, and that the existing systems installed at Vermont Yankee are fully operable. Based on the above discussion, we cannot agree with your conclusions that we are not in full compliance with the applicable requirements. Thus, we respectfully request that the subject Notice of Violation be withdrawn. Additionally, pending NRC approval, Vermont Yankee wishes to declare the Cable Vault CO<sub>2</sub> system operable. We will, however, continue to be responsive to NRC's concerns regarding the Cable Vault CO<sub>2</sub> system. Therefore, after declaring the subject CO<sub>2</sub> system operable, Vermont Yankee will establish a once per hour fire watch. Further, Vermont Yankee will conduct a full discharge test of the Cable Vault CO<sub>2</sub> system as soon as practicable but no later than the end of the next scheduled outage.

We are aware that the issue of operability of CO<sub>2</sub> systems with respect to full discharge testing standards is a recent Region I concern with other licensees as well as Vermont Yankee. At your convenience, we would be willing to meet with appropriate Region I personnel on this issue to discuss our specific situation.

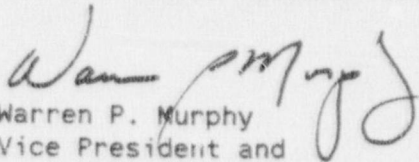
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We trust that the above information is sufficient to address the issue; however, should you have any questions or desire additional information, please feel free to contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

  
Warren P. Murphy  
Vice President and  
Manager of Operations

/dm

cc: USNRC Regional Administrator, Region I  
USNRC Resident Inspector, VYNPS