

APR 29 1976

Docket No. 50-271

Yankee Atomic Electric Company
ATTN: Mr. Robert H. Groce
Licensing Engineer
20 Turnpike Road
Westboro, Massachusetts 01581

Gentlemen:

The Commission has issued the enclosed Amendment No. 22 to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station. The amendment consists of changes to the Technical Specifications in response to your application dated December 8, 1975.

This amendment modifies Technical Specification Table 3.1.1 to clarify and refine the requirement governing operator response to a failed instrument channel. This amendment also makes minor editorial changes to the Technical Specifications.

Copies of the Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Original signed by

Robert W. Reid, Chief
Operating Reactors Branch No. 4
Division of Operating Reactors

Enclosures:

1. Amendment No. 22
2. Safety Evaluation
3. Federal Register Notice

cc: See next page

Distribution

Docket

- NRC PDR
- Local PDR
- ORB4 Rdg
- KRGoller/TJCarter
- RIngram
- ~~RDiBenedetto~~
- PDiBenedetto
- TAbernathy
- JRBuchanan
- OELD

- OI&E (#)
- BJones (4)
- BScharf (10)
- ~~JMcGough~~
- JMcGough
- ACRS (16)
- OPA CMiles
- VStello

ni 4/19/76

*with copy to
radio for
note*

[Signature]

OFFICE →	ORB4	ORB4	OELD	ORB4		
SURNAME →	PDiBenedetto	mt RWReid	L.B. Jones	RWReid		
DATE →	4/20/76	4/1/76	4/21/76	4/29/76		



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

VERMONT YANKEE NUCLEAR POWER CORPORATION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 22
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Vermont Yankee Nuclear Power Corporation (the licensee) dated December 8, 1975, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - 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. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.

April 29, 1976

cc:

Mr. James E. Griffin, President
Vermont Yankee Nuclear Power Corporation
77 Grove Street
Rutland, Vermont 05701

Mr. Donald E. Vandenburg, Vice President
Vermont Yankee Nuclear Power Corporation
Turnpike Road, Route 9
Westboro, Massachusetts 01581

John A. Ritsher, Esquire
Ropes & Gray
225 Franklin Street
Boston, Massachusetts 02110

Gregor I. McGregor, Esquire
Assistant Attorney General
Department of the Attorney General
State House, Room 370
Boston, Massachusetts 20005

Richard E. Ayres, Esquire
Natural Resources Defense
917 - 15th Street, N. W.
Washington, D. C. 20005

Honorable M. Jerome Diamond
Attorney General
State of Vermont
109 State Street
Pavilion Office Building
Montpelier, Vermont 05602

John A. Calhoun
Assistant Attorney General
109 State Street
Pavilion Office Building
Montpelier, Vermont 05602

Anthony Z. Roisman, Esquire
Berlin, Roisman and Kessler
1712 N. Street, N.W.
Washington, D. C. 20036

Brooks Memorial Library
224 Main Street
Brattleboro, Vermont 05301

Mr. John R. Stanton, Director
Radiation Control Agency
Hazen Drive
Concord, New Hampshire 03301

Mr. John W. Stevens
Conservation Society of
Southern Vermont
P. O. Box 256
Townshend, Vermont 05353

Mr. David M. Scott
Radiation Health Engineer
Agency of Human Services
Division of Occupational Health
P. O. Box 607
Barre, Vermont 05641

New England Coalition on
Nuclear Pollution
Hill and Dale Farm
West Hill - Faraway Road
Putney, Vermont 05346

Mr. Raymond H. Puffer
Chairman
Board of Selectman
Vernon, Vermont 05354

cc w/enclosures and copy of
VY's filing dtd. 12/8/75
Mr. Martin K. Miller, Chairman
State of Vermont
Public Service Board
120 State Street
Montpelier, Vermont 05602

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch No. 4
Division of Operating Reactors

Attachment:
Changes to the
Technical Specifications.

Date of Issuance:
April 29, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 22

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Revise Appendix A as follows:

Remove Pages

21

--

25

Insert Pages

21

21a

25

Revise Appendix B as follows:

Remove Pages

4

5

6

Insert Pages

4

5

6

The changed areas on the revised pages are shown by a marginal line.

VYNP3

TABLE 3.1.1 NOTES

1. When the reactor is subcritical and the reactor water temperature is less than 212°F, only the following trip functions need to be operable:
 - a) mode switch in shutdown
 - b) manual scram
 - c) high flux IBM or high flux SRM in coincidence
 - d) scram discharge volume high water level.
2. Whenever an instrument system is found to be inoperable, the instrument system output relay shall be tripped immediately. Except for MSIV & Turbine Stop Valve Position, this action shall result in tripping the trip system.
3. When the requirements in the column "Minimum Number of Operating Instrument Channels Per Trip System" cannot be met for one system, that system shall be tripped. If the requirements cannot be met for both trip systems, the appropriate actions listed below shall be taken:
 - A. Initiate insertion of operable rods and complete insertion of all operable rods within four hours.
 - B. Reduce power level to IRM range and place mode switch in the "Startup/Hot Standby" position within eight hours.
 - C. Reduce turbine load and close main steamline isolation valves within eight hours.
 - D. Reduce reactor power to less than 30% of rated within eight hours.
4. "W" is percent rated drive flow where 100% rated drive flow is that flow equivalent to 48×10^6 lbs/hr core flow.
5. To be considered operable an APRM must have at least 2 LPRM inputs per level and at least a total of 13 LPRM inputs, except that channels A, C, D, and F may lose all LPRM inputs from the companion APRM Cabinet plus one additional LPRM input and still be considered operable.
6. 1 inch on the water level instrumentation is 127 inches above the top of the active fuel.
7. Channel shared by the Reactor Protection and Primary Containment Isolation Systems.
8. An alarm setting of 1.5 times normal background at rated power shall be established to alert the operator to abnormal radiation levels in primary coolant.

VYNFS

9. Channel signals for the turbine control valve fast closure trip shall be derived from the same event or events which cause the control valve fast closure.
10. A turbine stop valve closure and generator load rejection bypass is permitted when the first stage turbine pressure is less than 30 percent of normal (220 psia).
11. The IRM scram is bypassed when the APRM's are on scale and the mode switch is in the run position.

TABLE 4.1.2

SCRAM INSTRUMENT CALIBRATIONMINIMUM CALIBRATION FREQUENCIES FOR REACTOR PROTECTION INSTRUMENT CHANNELS

<u>Instrument Channel</u>	<u>Group⁽¹⁾</u>	<u>Calibration Standard⁽⁴⁾</u>	<u>Minimum Frequency⁽²⁾</u>
High Flux APRM			
Output Signal	B	Heat Balance	Once Every 7 Days
Output Signal (Reduced)	B	Heat Balance	Once Every 7 Days
Flow Bias	B	Standard Pressure and Voltage Source	Refueling Outage
LPRM	B ⁽⁵⁾	Using TIP System	Every 1000 equiv. full pwr. h
High Reactor Pressure	A	Standard Pressure Source	Every 3 months
Turbine Control Valve Fast Closure	A	Standard Pressure Source	Every 3 months
High Drywell Pressure	A	Standard Pressure Source	Every 3 months
High Water Level in Scram Discharge Volume	A	Water Level	Refueling Outage
Low Reactor Water Level	A	Water Level	Every 3 months
Turbine Stop Valve Closure	A	(6)	Refueling Outage
High Main Steamline Radiation	B	Appropriate Radiation Source ⁽³⁾	Refueling Outage
First Stage Turbine Pressure Permissive	A	Pressure Source	Every 6 months and after refueling
Main Steamline Isolation Valve Closure	A	(6)	Refueling Outage

1.0 LIMITING CONDITIONS FOR OPERATION

If the total residual chlorine level at the aerating structure exceeds 0.5 mg/l or 0.1 mg/l in the receiving water 100 ft from the discharge structure, as determined by an analysis of 3 samples, chlorination shall cease until the system is corrected. Any corrective actions required to maintain the 0.5 mg/l limit shall be described in the plant Annual Operations Report. During chlorination the discharge area shall be visually inspected (6 times per week) for evidence of detrimental effects on aquatic life, such as dead fish or fish in distress. Such evidence, if any, shall be noted and a record of such evidence shall be maintained.

3. The hydrogen ion concentration of plant discharges shall be controlled within pH limits of 6.5 - 8.0, except when due to natural causes.
5. Approximately 10,600 gallons per month of sodium hypochlorite (15% solution) will be released to condenser cooling water during chlorination (during open-cycle) for slime and algae control. During closed-cycle cooling water operation about 900 gallons per month of sulfuric acid will be used for pH control. In the regeneration of cation and anion make-up demineralizers, about 470 gallons per month of sodium hydroxide will be used. Mixed bed demineralizers will require approximately 340 gallons per month of sulfuric acid for regeneration.

2.0 SURVEILLANCE REQUIREMENTS

to Vernon Pond (i.e. concentration over a given time period) that is compatible with plant operation.

3. The pH of the condenser cooling water shall be continuously monitored and recorded.
4. During operation with inoperable analyzers or recorders, daily grab samples shall be collected and analyzed to confirm chemical concentration limits.
5. The usage of sodium hypochlorite and sulfuric acid for the treatment of cooling water and the usage of sulfuric acid and sodium hydroxide for demineralizer regeneration shall be recorded in the Plant Annual Operation Report.

1.0 LIMITING CONDITIONS FOR OPERATION

C. River Flow

A minimum flow of 1,200 cubic feet per second of water will be provided through the dam at Vernon, Vermont at all times during plant operation. If, due to causes beyond Vermont Yankee's control, the flow must be reduced below 1,200 cfs, the condenser cooling system will be operated in a closed cycle mode and a report will be made to the AEC in accordance with Section 6.7 (a) of Appendix A.

D. Fish Kill

Fish collected on the trash racks or traveling water screens at the station shall be identified by species, size and quantity. While the impact of fish mortalities which may occur at Vermont Yankee with respect to the local fishery resource is unknown, these data will be collected and assessed as described in Section 2.2.2 of this Appendix (Non-Radiological Monitoring).

2.0 SURVEILLANCE REQUIREMENTS

C. River Flow

Measurement of continuous river flow through the dam at Vernon, Vermont shall be recorded via the U.S.G.S. tailrace gage at the Vernon hydroelectric station.

D. Fish Kill

Data on fish collected shall be included in the annual plant operating report.

E. Administrative Controls

1. The action to be taken in the event of a reportable occurrence in plant operation will be in accordance with Section 6.3 of Appendix A.

1.0 LIMITING CONDITIONS FOR OPERATION

2.0 SURVEILLANCE REQUIREMENTS

2. Records and logs relative to the following items shall be retained for 5 years:
 - a) River water temperature measurement at the upstream and downstream monitors.
 - b) Free and total chlorine residual measurements.
 - c) pH measurements.
3. The following items shall be reported in the Annual Operating Report:
 - a) Free and total chlorine residual measurements.
 - b) Usage of sodium hypochlorite, sulfuric acid and sodium hydroxide.
 - c) Fish killed.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 22 TO FACILITY OPERATING LICENSE NO. DPR-28

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

INTRODUCTION

By letter dated December 8, 1975, Vermont Yankee Nuclear Power Corporation (VYNPC) requested a change to the notes associated with Table 3.1.1 of the Vermont Yankee Nuclear Power Station (VYNPS) Technical Specifications, appended to Facility Operating License No. DPR-28.

DISCUSSION

The requested change is to note 2 associated with Section 3.1, "Reactor Protection System", Table 3.1.1 of the VYNPS Appendix A Technical Specifications and is intended to clarify and refine the requirement governing operator response to a failed instrument channel.

EVALUATION

We have reviewed the proposed change. The intent of the change is to define, for an operator, the necessary action to be taken when an instrument system is found to be inoperable. The action required, that is, immediately tripping the instrument output relay, insures that the entire system functions as intended upon receipt of a trip signal from a second instrument, whether the cause is instrument inoperability or an action signal generated by the function of the instrument. This clarification will mitigate the possibility of a misinterpretation which could cause single failure proneness of the trip system and will further increase the trip system's reliability to function as intended and is therefore acceptable.

Based on the above, we have concluded that this change is acceptable and consistent with current practice.

This amendment also makes minor editorial changes and incorporates changes to Appendix B of the Technical Specifications. The changes correct the frequency of environmental reporting from monthly to annually and are consistent with the changes of Amendment No. 17 issued November 5, 1975. These changes were inadvertently omitted when Amendment No. 17 was issued. We have discussed these additional changes with the licensee and they agree.

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above that: (1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public

Dated:

April 29, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 22 to Facility Operating License No. DPR-28 issued to Vermont Yankee Nuclear Power Corporation which revised Technical Specifications for operation of the Vermont Yankee Nuclear Power Station, located near Vernon, Vermont. This amendment is effective as of its date of issuance.

The amendment modifies Technical Specification Table 3.1.1 to clarify and refine the requirement governing operator response to a failed instrument channel. This amendment also makes minor editorial changes to the Technical Specifications, and corrects the frequency of environmental reporting from monthly to annually consistent with the changes of Amendment No. 17 issued November 5, 1975. These changes to the environmental reporting frequency were inadvertently omitted from Amendment No. 17.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate

findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated December 8, 1975, (2) Amendment No. 22 to License No. DPR-28, (3) the Commission's related Safety Evaluation and (4) Amendment No. 17 to License No. DPR-28 issued November 5, 1975, and related documents. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Brooks Memorial Library, 224 Main Street, Brattleboro, Vermont. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 29th day of April, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION


Robert W. Reid, Chief
Operating Reactors Branch No. 4
Division of Operating Reactors