

August 22, 1994

Docket No. 50-271

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

**DISTRIBUTION:**

Docket File	TCollins
NRC & Local PDRs	JLinville, RI
PDI-3 Reading	OGC 15B18
SVarga	DHagan - MNBB 3206
JCalvo	GHill (2) - T-5C3
WButler	CGrimes - 11F23
SLittle	ACRS (10) P315
DDorman	OPA - 2G5
KCotton	OC/LFDCB - MNBB 11104

Dear Mr. Reid

SUBJECT: ISSUANCE OF AMENDMENT NO. 140 TO FACILITY OPERATING LICENSE  
NO. DPR-28, VERMONT YANKEE NUCLEAR POWER STATION (TAC NO. M89515)

The Commission has issued the enclosed Amendment No. 140 to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station. This amendment is in response to your application dated May 20, 1994.

The proposed amendment would remove Core Spray High Sparger Instrumentation from the Vermont Yankee Technical Specifications for Emergency Core Cooling System Actuation Instrumentation. In addition, an unrelated administrative change is also requested.

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

Sincerely,

Original signed by Ronald Eaton for  
Daniel H. Dorman, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 140 to License No. DPR-28
2. Safety Evaluation

cc w/enclosures:  
See next page

OFFICE	PDI-3:OA	PDI-3:PE	PDI-3:PM	OGC <i>ES</i>	SRXB:BC <i>to</i>	D:PDI-3
NAME	SLittle	KCotton <i>mc</i>	DDorman <i>DD</i>	<i>R Bachmann</i>	TCollins	WButler
DATE	8/14/94	8/14/94	8/14/94	8/15/94	8/18/94	8/22/94

OFFICIAL RECORD COPY  
Document Name: VYM89515.AMD

9408260185 940822  
PDR ADOCK 05000271  
P PDR

200038

NRC FILE CENTER COPY

CPA

DF01



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 22, 1994

Docket No. 50-271

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

Dear Mr. Reid:


SUBJECT: ISSUANCE OF AMENDMENT NO. 140 TO FACILITY OPERATING LICENSE  
NO. DPR-28, VERMONT YANKEE NUCLEAR POWER STATION (TAC NO. M89515)

The Commission has issued the enclosed Amendment No. 140 to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station. This amendment is in response to your application dated May 20, 1994.

The proposed amendment would remove Core Spray High Sparger Instrumentation from the Vermont Yankee Technical Specifications for Emergency Core Cooling System Actuation Instrumentation. In addition, an unrelated administrative change is also requested.

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

Sincerely,

  
Daniel H. Dorman, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 140 to License No. DPR-28
2. Safety Evaluation

cc w/enclosures:  
See next page

Mr. Donald A. Reid, Vice President  
Operations

Vermont Yankee Nuclear Power Station

cc:

Mr. Jay Thayer, Vice President  
Yankee Atomic Electric Company  
580 Main Street  
Bolton, Massachusetts 01740-1398

G. Dana Bisbee, Esq.  
Office of the Attorney General  
Environmental Protection Bureau  
State House Annex  
25 Capitol Street  
Concord, New Hampshire 03301-6937

Regional Administrator, Region I  
U. S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Resident Inspector  
Vermont Yankee Nuclear Power Station  
U.S. Nuclear Regulatory Commission  
P. O. Box 176  
Vernon, Vermont 05354

R. K. Gad, III  
Ropes & Gray  
One International Place  
Boston, Massachusetts 02110-2624

Chief, Safety Unit  
Office of the Attorney General  
One Ashburton Place, 19th Floor  
Boston, Massachusetts 02108

Mr. Richard P. Sedano, Commissioner  
Vermont Department of Public Service  
120 State Street, 3rd Floor  
Montpelier, Vermont 05602

Mr. David Rodham, Director  
Massachusetts Civil Defense Agency  
400 Worcester Rd.  
P.O. Box 1496  
Framingham, Massachusetts 01701-0317  
ATTN: James Muckerheide

Public Service Board  
State of Vermont  
120 State Street  
Montpelier, Vermont 05602

Chairman, Board of Selectmen  
Town of Vernon  
Post Office Box 116  
Vernon, Vermont 05354-0116

Mr. Raymond N. McCandless  
Vermont Division of Occupational  
and Radiological Health  
Administration Building  
Montpelier, Vermont 05602

Mr. J. P. Pelletier, Vice President  
Vermont Yankee Nuclear Power  
Corporation  
Ferry Road  
Brattleboro, Vermont 05301

Mr. L. A. Tremblay  
Senior Licensing Engineer  
Vermont Yankee Nuclear Power  
Corporation  
580 Main Street  
Bolton, Massachusetts 01740-1398

Mr. Robert J. Wanczyk, Plant Manager  
Vermont Yankee Nuclear Power Plant  
P. O. Box 157, Governor Hunt Road  
Vernon, VT 05354



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. 140  
License No. DPR-28

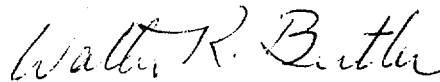
1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Vermont Yankee Nuclear Power Corporation (the licensee) dated May 20, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the 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. 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:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 140, 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, 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: August 22, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 140

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 area of change.

Remove

38

59

Insert

38

59

VYNPS

TABLE 3.2.1

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

Core Spray - A & B (Note 1)			
<u>Minimum Number of Operable Instrument Channels per Trip System</u>	<u>Trip Function</u>	<u>Trip Level Setting</u>	<u>Required Action When Minimum Conditions for Operation are Not Satisfied</u>
2	High Drywell Pressure	$\leq 2.5$ psig	Note 2
2	Low-Low Reactor Vessel Water Level	$> 82.5''$ above top of enriched fuel	Note 2
1	Low Reactor Pressure (PT-2-3-56C/D(S1))	$300 \leq P \leq 350$ psig	Note 2
2	Low Reactor Pressure (PT-2-3-56A/B(S1) & 52C/D(M))	$300 \leq P \leq 350$ psig	Note 2
1	Time Delay (14A-K16A & B)	$\leq 10$ seconds	Note 2
2	Pump (P-46-1A/B) Discharge Pressure	$\geq 100$ psig	Note 5
1	Auxiliary Power Monitor	--	Note 5
1	Pump Bus Power Monitor	--	Note 5
1	Trip System Logic	--	Note 5

VYNPS

TABLE 4.2.1

MINIMUM TEST AND CALIBRATION FREQUENCIES  
EMERGENCY CORE COOLING ACTUATION INSTRUMENTATION

<u>Core Spray System</u>			
<u>Trip Function</u>	<u>Functional Test(8)</u>	<u>Calibration(8)</u>	<u>Instrument Check</u>
High Drywell Pressure	(Note 1)	Once/Operating Cycle	Once Each Day
Low-Low Reactor Vessel Water Level	(Note 1)	Once/Operating Cycle	Once Each Day
Low Reactor Pressure (PT-2-3-56C/D(S1))	(Note 1)	Once/Operating Cycle	--
Low Reactor Pressure (PT-2-3-56A/B(S1) & 52C/D(M))	(Note 1)	Once/Operating Cycle	--
Pump (P-46-1A/B) Discharge Pressure	(Note 1)	Every Three Months	--
Auxiliary Power Monitor	(Note 1)	Every Refueling	Once Each Day
Pump Bus Power Monitor	(Note 1)	None	Once Each Day
Trip System Logic	Once/Operating Cycle	Once/Operating Cycle (Note 3)	--





UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO.140 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 May 20, 1994, the Vermont Yankee Nuclear Power Corporation (the licensee) submitted a request for changes to the Vermont Yankee Nuclear Power Station Technical Specifications (TSs). The requested changes would remove Core Spray (CS) High Sparger Instrumentation from Vermont Yankee Technical Specifications Tables 3.2.1 and 4.2.1 regarding Emergency Core Cooling System (ECCS) Actuation Instrumentation. In addition, an unrelated administrative change is also proposed.

2.0 EVALUATION

The CS system's function is to protect against overheating of the fuel in the event the core is uncovered by the loss-of-coolant accident. The cooling effect is accomplished by directing spray jets of cooling water directly onto the fuel assemblies from spray nozzles mounted in the sparger ring located within the shroud just above the reactor core.

The system consists of two independent loops. Each loop consists of two 50% capacity centrifugal pumps driven by electric motors; a spray sparger in the reactor vessel above the core; piping and valves to convey water from the suppression pool to the sparger; and the associated controls and instrumentation.

CS system pressure between the two pump discharge valves is monitored by a pressure switch to permit detection of leakage from the primary system into the CS system outside the primary containment. A detection system is also provided to continuously confirm the integrity of the CS piping between the inside of the reactor vessel and the core shroud. A differential pressure switch measures the pressure difference between the bottom of the core and the inside of the CS sparger pipe just outside the reactor vessel. If the CS sparger piping is sound, this pressure difference will be the pressure drop across the core. If integrity is lost, this pressure drop will include the core pressure drop and the steam separator pressure drop. An increase in the normal pressure drop initiates an alarm in the main control room. Pressure in

each CS pump suction and discharge pipeline is monitored by a pressure indicator which is locally mounted to permit determination of suction head and pump performance.

The licensee submitted an amendment requesting the removal of CS High Sparger Pressure Instrumentation from the TSs for ECCS Actuation Instrumentation. In addition some unrelated administrative changes were also requested.

The licensee is requesting to revise Tables 3.2.1 and 4.2.1 to remove CS High Sparger Pressure Instrumentation from the Vermont Yankee (VY) TSs for ECCS Actuation Instrumentation. Licensee indicated that the inclusion of this instrumentation is inconsistent with other instrumentation included in Tables 3.2.1 and 4.2.1. Tables 3.2.1 and 4.2.1 are included in the TSs under "Protective Instrument Systems." The VY definition of "Protective Function" as it appears in the VY TSs is as follows:

"A system protective action which results from the protective action of the channels monitoring a particular plant condition."

The licensee stated that this definition is not applicable to CS High Sparger Pressure Instrumentation which performs a local indication and alarming function only and is classified as nonnuclear safety (NNS) related. As such, this instrumentation is not considered protective instrumentation which is required to function to initiate actions to mitigate the consequences of accidents. No actuation of systems or initiation of equipment trip functions are performed by this CS Sparger Instrumentation.

The instrumentation suggested for removal from the ECCS Actuation Instrumentation TSs perform a local monitoring and alarming function only. This change will not pose any change to hardware or to the design basis, protective function, redundancy, trip point, or logic of the original system.

The proposed administrative changes correct typographical errors. They are incorporated to enhance the accuracy of the TSs.

The proposed revisions do not affect the performance of safety-related equipment. The CS Sparger Instrumentation does not provide a trip function as indicated by Table 4.2.1. This instrumentation performs an annunciator function only. Annunciator functions are not safety-related and are not part of the TSs.

The NRC staff finds the proposed change removing CS Sparger Instrumentation from Table 4.2.1 acceptable. The additional changes are administrative in nature only and the staff finds them 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. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (59 FR 34669). 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: K. Cotton

Date: August 22, 1994