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. 108
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 May 23, 1988 as supplemented August 15, 1988 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 2.C(2) of Facility Operating License No. DPR-28 is hereby amended to read as follows:

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(B) Technical Specifications

The Technical Specifications, contained in Appendix A, as revised through Amendment No.108 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 30 days after the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard H. Wessman, Director
Project Directorate I-3
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 9, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 108

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

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

Remove Pages	Insert Pages
180a	180a
180b	180b
180f	180f
-	180-n7*
-	180-n8*
189	189

*Indicates new page

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.11 REACTOR FUEL ASSEMBLIES

Applicability:

The Limiting Conditions for Operation associated with the fuel rods apply to these parameters which monitor the fuel rod operating conditions.

Objective:

The Objective of the Limiting Conditions for Operation is to assure the performance of the fuel rods.

Specifications:

A. Average Planar Linear Heat Generation Rate (APLHGR)

During steady state power operation, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed the limiting values shown in Tables 3.11-1A through J. For single recirculation loop operation, the limiting values shall be the values from Tables 3.11-1B through E and Table 3.11-1G through J listed under the heading "Single Loop Operation." These values are obtained by multiplying the values for two loop operation by 0.83. If at any time during steady-steate operation it is determined by normal surveillance that the limiting value for APLHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed

4.11 REACTOR FUEL ASSEMBLIES

Applicability:

The Surveillance Requirements apply to the parameters which monitor the fuel rod operating conditions.

Objective:

The Objective of the Surveillance Requirements is to specify the type and frequency of surveillance to be applied to the fuel rods.

Specifications:

A. Average Planar Linear Heat Generation Rate (APLHGR)

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at ≥25% rated thermal power.

LIMITING CONDITIONS FOR OPERATION

limits. If the APLHGR isnot returned to within prescribed limits within two (2) hours, the reactor shall be brought to the shutdown conditions within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

B. Linear Heat Generation Rate (LHGR)

During steady state power operation, the linear heat generation rate (LHGR) of any rod in any fuel assembly at any axial location shall not exceed the maximum allowable LHGR specified in Table 1.

If at any time during steady state operation it is determined by normal surveillance that the limiting value for LHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the LHGR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

SURVEILLANCE REQUIREMENTS

B. Linear Heat Generation Rate (LHGR)

The LHGR as a function of core height shall be checked daily during reactor operation at ≥25% rated thermal power.

C. Minimum Critical Power Ratio

MCPR shall be determined daily during reactor power operation at ≥25% rated thermal power and following any change in power level or distribution that would cause operation with a limiting control rod pattern as described in the bases for Specification 3.3.B.6.

Table 1

SIGNIFICANT INPUT PARAMETERS TO THE
LOSS-OF-COOLANT ACCIDENT ANALYSIS

Plant Parameters:

Core Thermal Power	1664 MWt, which corresponds to 105% of rated steam flow
Vessel Steam Output	6.75×10^6 lbm/h, which corresponds to 105% of rated steam flow
Vessel Steam Dome Pressure	1055 psia
Recirculation Line Break Area for Large Breaks - Discharge	2.26 ft^2 (DBA)
- Suction	4.14 ft^2
Number of Drilled Bundles	220

Fuel Parameters:

	Fuel Type	Fuel Bundle Geometry	Peak Technical Specification Linear Heat Generation Rate (kW/ft)	Design Axial Peaking Factor	Initial Minimum Critical Power Ratio*
A.	7D230	7 x 7	18.5	1.4	1.2
B.	8D219	8 x 8	13.4	1.4	1.2
C.	8D274L	8 x 8	13.4	1.4	1.2
D.	8D274H	8 x 8	13.4	1.4	1.2
E.	8D274 (High Gd)	8 x 8	13.4	1.4	1.2
F.	LTA	8 x 8	13.4	1.4	1.2
G.	8DPB289 & P8DPB289	8 x 8	13.4	1.4	1.2
H.	BP8DRB299	8 x 8	13.4	1.4	1.2
I.	BD324B	8 x 8EB	14.4	1.4	1.2
J.	BD325B	8 x 8EB	14.4	1.4	1.2

* To account for the 2% uncertainty in bundle power required by Appendix K, the SCAT calculation is performed with an MCPR of 1.18 (i.e., 1.2 divided by 1.02) for a bundle with an initial MCPR of 1.20.

TABLE 3.11-1I

MAPLHGR Versus Average Planar Exposure

Plant: Vermont Yankee

Fuel Type: BD324B

Average Planar Exposure (MWd/t)	MAPLHGR (kW/ft) for Two Loop Operation			
	Majority Lattice	Shutdown Margin Zone	Power Peaking Zone	Natural Ends
200.0	11.76	11.24	11.71	11.50
1,000.0	11.90	11.42	11.83	11.30
2,000.0	12.05	11.61	11.96	11.28
3,000.0	12.21	11.85	12.15	11.33
5,000.0	12.51	12.17	12.40	11.47
7,000.0	12.63	12.54	12.63	11.61
10,000.0	12.80	12.80	12.80	11.72
14,400.0	12.80	12.80	12.80	11.15
15,000.0	12.75	12.74	12.74	11.07
20,000.0	12.07	12.05	12.06	10.29
25,000.0	11.41	11.39	11.40	9.50
35,000.0	10.14	10.12	10.12	7.93
43,360.0	8.80	8.73	8.74	4.66
50,000.0	6.08	5.99	6.02	-

Source: NEDO-21697, August 1977 (Revised)

Average Planar Exposure (MWd/t)	MAPLHGR (kW/ft) for Single Loop Operation*			
	Majority Lattice	Shutdown Margin Zone	Power Peaking Zone	Natural Ends
200.0	9.76	9.32	9.71	9.54
1,000.0	9.87	9.47	9.81	9.37
2,000.0	10.00	9.63	9.92	9.36
3,000.0	10.13	9.83	10.08	9.40
5,000.0	10.38	10.10	10.29	9.32
7,000.0	10.48	10.40	10.48	9.63
10,000.0	10.62	10.62	10.62	9.72
14,400.0	10.62	10.62	10.62	9.25
15,000.0	10.58	10.57	10.57	9.18
20,000.0	10.01	10.00	10.00	8.54
25,000.0	9.47	9.45	9.46	7.88
35,000.0	8.41	8.39	8.39	6.38
43,360.0	7.30	7.24	7.25	3.36
50,000.0	5.04	4.97	4.99	-

* MAPLHGR for single loop operation is obtained by multiplying MAPLHGR for two loop operation by 0.83.

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TABLE 3.11-1J

MAPLHGR Versus Average Planar Exposure

Plant: Vermont Yankee

Fuel Type: BD326B

Average Planar Exposure (MWd/t)	MAPLHGR (kW/ft) for Two Loop Operation			
	Majority Lattice	Shutdown Margin Zone	Power Peaking Zone	Natural Ends
200.0	11.30	11.25	11.76	11.50
1,000.0	11.86	11.42	11.79	11.30
2,000.0	11.97	11.56	11.88	11.28
3,000.0	12.10	11.74	11.99	11.33
5,000.0	12.48	12.16	12.33	11.47
7,000.0	12.69	12.66	12.69	11.61
10,000.0	12.90	12.90	12.90	11.72
14,400.0	12.90	12.90	12.90	11.15
15,000.0	12.84	12.82	12.82	11.07
20,000.0	12.14	12.12	12.12	10.29
25,000.0	11.46	11.44	11.45	9.50
35,000.0	10.17	10.15	10.16	7.93
43,360.0	8.94	8.87	8.91	4.66
50,000.0	6.25	6.17	6.22	-

Source: NEDO-21697, August 1977 (Revised)

Average Planar Exposure (MWd/t)	MAPLHGR (kW/ft) for Single Loop Operation*			
	Majority Lattice	Shutdown Margin Zone	Power Peaking Zone	Natural Ends
200.0	9.79	9.42	9.76	9.54
1,000.0	9.84	9.47	9.78	9.37
2,000.0	9.93	9.59	9.86	9.36
3,000.0	10.04	9.74	9.95	9.40
5,000.0	10.35	10.09	10.23	9.52
7,000.0	10.53	10.50	10.53	9.63
10,000.0	10.70	10.70	10.70	9.72
14,400.0	10.70	10.70	10.70	9.25
15,000.0	10.65	10.64	10.64	9.18
20,000.0	10.07	10.05	10.05	8.54
25,000.0	9.51	9.49	9.50	7.88
35,000.0	8.44	8.42	8.43	6.58
43,360.0	7.42	7.36	7.39	3.86
50,000.0	5.18	5.12	5.16	-

* MAPLHGR for single loop operation is obtained by multiplying MAPLHGR for two loop operation by 0.83.

5.5 Spent and New Fuel Storage

A. The new fuel storage facility shall be such that the effective multiplication factor (K_{eff}) of the fuel when dry is less than 0.90 and when flooded is less than 0.95.

B. The K_{eff} of the fuel in the spent fuel storage pool shall be less than or equal to 0.95.

C. Spent fuel storage racks may be moved (only) in accordance with written procedures which ensure that no rack modules are moved over fuel assemblies.

D. The number of spent fuel assemblies stored in the spent fuel pool shall not exceed 2,000.

E. The maximum core geometry infinite lattice multiplication factor of any segment of the fuel assembly stored in the spent fuel storage pool or the new fuel storage facility shall be less than or equal to 1.31 at 20°C.