

April 19, 1977

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. 35 to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station. This amendment consists of changes to the Technical Specifications in response to your request dated October 15, 1976.

This amendment revises the provisions in the Technical Specifications relating to the scope of the Vermont Yankee Radiological monitoring program.

We have evaluated the potential for environmental impact of plant operation for each of the changes and our appraisals are summarized in an enclosure to this letter. 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 impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Since the amendment applies only to the radiological monitoring program, it does not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

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A copy of the Federal Register Notice is also enclosed.

Sincerely,

Original Signed By

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosures:

1. Amendment No. 35
2. Appraisal
3. Federal Register Notice

cc w/enclosures:
See next page

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DATE	4/14/77	4/15/77	4/19/77	4/19/77	

Yankee Atomic Electric Company

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Yankee Atomic Electric
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filing dtd.: 10/15/76
Public Service Board
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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. 35
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 October 15, 1976, 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.

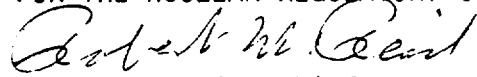
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B. of Facility Operating License No. DPR-28 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 35, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 90 days after the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 19, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 35

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Revise Appendix A Technical Specifications as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
166	166
167	167a and 167b
168 & 169	168 & 169

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

TABLE 3.9.1
ATMOSPHERIC AND TERRESTRIAL MONITORING STATIONS

Site	Location & Elevation	Distance Miles	Site Quadrant	Sample Media ⁽³⁾
<u>ZONE-I</u>				
AT1.0	Hinsdale, NH (280')	0.8	ENE	A-D-(c)-V-S
AT1.1	No. Hinsdale, NH (280')	2.5	NNW	A-D-(c)-V-S
AT1.2	Hinsdale, NH (360')	1.9	E	A-D-(c)-V-S
AT1.3	River Station #3.3, Vt (220')	1.2	SSE	A-D-(c)-V-S
AT1.4	Central Park Station, Vt. (450')	1.5	SW	A-D-(c)-V-S
AT1.5	Guilford Rd., Vernon (580')	1.5	WNW	A-D-(c)-V-S
AT1.6-1.16	Site Boundary, Vernon (variable)	Variable	Variable	D(11 locations)
AT1.17	Vernon School (300')	---	SSW	D
<u>ZONE-II</u>				
AT2.1	Hogback Mt., Vt. (1670')	15.5	WNW	A-D-(c)-V-S
AT2.2	Spofford Lake, NH (750')	10.0	NNE	A-D-(c)-V-S
AT2.3	Northfield, MA (350')	7.0	SSE	A-D-(c)-V-S

Symbols	Media	Collection Frequency	Type of Analysis
A	Air Particulate, Continuous Sampling	Weekly Quarterly Composite	Gross Beta, Sr-89-90 ⁽⁶⁾ , Gamma Spectroscopy
D	Direct Radiation (TLD Packet with Two Independent Readouts)	Monthly	Integrated Gamma Exposure
V (c)	Vegetation (mixed grass) Charcoal Filter Cartridges (during plant operation)	Quarterly ⁽⁴⁾ Weekly	Gamma Spectroscopy I-131
S	Soil	Once per 3 yrs.	Sr-89-90 ⁽⁶⁾ , Gamma Spectroscopy

VYNPS

TABLE 3.9.1
(continued)
GROUND WATER STATIONS

Site	Location	Distance Miles	Site Quadrant	Sample Media ⁽³⁾
<u>ZONE-I</u>				
GW1.1	VY Plant (well), On-Site	0.0	---	GW, S
GW1.2	Vt. X (well), Vernon Nursing	1.1	SSE	GW, S
GW1.3	Vt. #32 (well), Private Home	1.1	SE	GW, S
<u>ZONE-II</u>				
GW2.1	Supply wells, Brattleboro Country Club	7.0	NNW	GW, S

MILK MONITORING STATIONS

<u>ZONE-I</u>				
M1.1	Farm - Raw, Vernon	0.5	NW	MPE, M, FVS
M1.2	Farm - Raw, Vernon	1.8	S	MPE, M, FVS
M1.3	Farm - Raw, Vernon	3.6	SSE	MPE, M, FVS
<u>ZONE-II</u>				
M2.1	Raw or Processed, Brattleboro	10.	NNW	MPE, M, FVS

Symbols	Media	Collection Frequency	Type of Analysis
GW	Ground Water	Quarterly Once per 3 years	Gross Beta, Gamma Spectroscopy, Sr-89-90 ⁽⁶⁾ , H-3 Ra-226

VYNPS

TABLE 3.9.1
(continued)
MILK MONITORING STATIONS
(continued)

Symbols	Media	Collection Frequency	Type of Analysis
(continued)			
S	Soil	Once per 3 yrs.	Sr-89-90 ⁽⁶⁾ , Gamma Spectroscopy
MPE	Meat, Poultry, Eggs	Annually ⁽⁵⁾	Gamma Spectroscopy (edible portion) ⁽⁷⁾
M	Milk	Monthly	I-131, Sr-89-90, Gamma Spectroscopy
FVS	Fruit, Vegetables, Silage Crops	Annually ⁽⁴⁾	Gamma Spectroscopy, I-131 (on green leafy vegetables)

VYNPS

TABLE 3.9.1
(continued)
RIVER MONITORING STATIONS

Site	Location	River - Miles From Discharge	Sample Media ⁽³⁾
<u>ZONE-I</u>			
R1.1	Power Cable Crossing - South of Vernon Dam (Vt)	1.5 Downstream	RW ⁽¹⁾ -RS- [?]
R1.2	Vernon Pond near Discharge Structure (VT)	---	RW -RS- ^B
<u>ZONE-II</u>			
R2.1	Route 9 Highway Bridge (NH)	7.7 Upstream	RW-RS-B-S

AQUATIC VEGETATION STATIONS

S1.1	Swamp Area	~0.3 Downstream	AP
S1.2	Swamp Area	~0.3 Upstream	AP

Symbols	Media	Collection Frequency	Type Of Analysis
RW	River Water	Monthly ⁽²⁾ Quarterly Composite	Gross Beta, Gamma Spectroscopy Sr-89-90 ⁽⁶⁾ , H-3
RS	River Sediment	Semiannually	Gamma Spectroscopy, Sr-90 ⁽⁶⁾
B	Fish	Semiannually ⁽²⁾	Gamma Spectroscopy, Sr-89-90 ⁽⁶⁾
AP	Aquatic Plants	Semiannually ⁽²⁾	Gamma Spectroscopy, Sr-89-90 ⁽⁶⁾
S	Soil	Once per 3 yrs.	Gamma Spectroscopy, Sr-89-90 ⁽⁶⁾

TABLE 3.9.1
(continued)

NOTES

- (1) Composite monthly water samples will be collected during operational monitoring period.
- (2) Approximate collection frequency dependent upon the availability of aquatic organisms of limitations imposed by severe winter conditions.
- (3) Media will be sampled in reasonable proximity to specified sampling point, depending upon nearest availability of suitable media. Zone II MPE, FVS and M will be taken within 20 miles of plant in a predominantly upwind direction.
- (4) Approximate collection frequency dependent upon availability of vegetation samples and limitations imposed by severe winter conditions. Collection at harvest time is intended for FVS.
- (5) Subject to availability at end of grazing season.
- (6) Sr-89-90 analysis performed whenever plant related Cs-137 activity concentration is ten times the non-plant related level.
- (7) Sr-89-90 analysis performed on quarterly composit.



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

APPRAISAL OF CHANGES IN THE RADIOLOGICAL
MONITORING PROGRAM TECHNICAL SPECIFICATIONS
FOR VERMONT YANKEE NUCLEAR POWER STATION

By letter dated October 15, 1976, Vermont Yankee Nuclear Power Corporation (VYNPC) proposed changes to the Appendix A Technical Specifications for the Vermont Yankee Nuclear Power Station (VYNPS).

The VYNPC proposal involves changes to Table 3.9.1 of the VYNPS Appendix A Technical Specifications, as follows:

- (1) expanding the scope of the radiological monitoring program to include additional sample media;
- (2) adding analyses for Sr-89, 90 and Ra-226 in selected media;
- (3) deleting certain redundant water sampling points;
- (4) adding a program of soil sampling and monitoring, and
- (5) updating of the milk monitoring program.

In addition, several minor descriptive inaccuracies and clerical or typographical errors are corrected.

The present monitoring program does not provide for monitoring of meat, poultry, eggs, fruits, vegetables and silage. The proposed program will monitor for uptake of radioactivity in these media that might result from plant operation. The proposed change improves the overall radiological environmental monitoring and is consistent with current guidance. Therefore, we conclude this change to be acceptable.

The existing Technical Specifications do not provide for sampling of Sr-89, 90 or Ra-226 in media where uptake might result from plant operation. The change provides for analysis of Sr-89, 90 in air, milk, soil, ground and river water, fish and aquatic plants. In addition, monitoring of river sediment for Sr-89 and groundwater for Ra-226 is proposed. These proposed changes are appropriate for an adequate radiological environmental monitoring program and are consistent with current guidance. We conclude this to be acceptable.

The proposed change would reduce the number of river sampling stations from 6 to 3 and reduce the number of groundwater sampling stations from 7 to 4. Those stations eliminated are redundant with continuing stations, and are less likely than continuing stations to detect radioactivity due to plant operation. The continuing river and groundwater stations have been selected to optimize detection of radioactivity in the sampled media that might result from plant operation. In addition, analyses have been expanded to include Sr-89, 90 analyses when Cs-137 level exceeds ten times background due to plant operation.

The additional types of analysis are appropriate additions to the monitoring program, and the proposed deletions in river and groundwater sampling and monitoring do not reduce the effectiveness of the program, and are, therefore, acceptable.

The present radiological monitoring program does not provide for sampling and monitoring of soil to detect possible buildup of radioactivity resulting from plant activity. The proposed change would require collection and monitoring of soil samples from indicator and control stations by gamma spectroscopy, and would monitor Sr-89, 90 when Cs-137 levels exceed ten times background due to plant operation. This proposed addition to the radiological environmental monitoring is appropriate and consistent with current guidance, and acceptable.

A proposed change in the milk sampling and monitoring program involves relocating a sampling station to a point where milk from a grazing herd is more reliably available, and where the average X/Q is about three times greater than in the previous location. In addition, the program has been upgraded to require monthly analysis for I-131, Sr-89, 90, and gamma isotopic analysis. The proposed change is an improvement over the previous milk sampling and monitoring specification. We conclude that this change is acceptable.

We find that the above-mentioned changes to the Technical Specifications will provide more definitive information from the radiological monitoring program, and based on this, we conclude that the proposed changes are acceptable.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 35 to Facility Operating License No. DPR-28, issued to Vermont Yankee Nuclear Power Corporation (the licensee), which revised Technical Specifications for operation of the Vermont Yankee Nuclear Power Station (the facility) located near Vernon, Vermont. The amendment becomes effective 90 days after its date of issuance.

This amendment revises the provisions in the Technical Specifications relating to the scope of the Vermont Yankee Radiological monitoring program.

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.

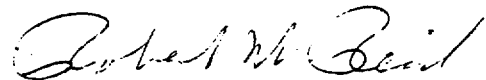
The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance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

For further details with respect to this action, see (1) the application for amendment dated October 15, 1976, and (2) Amendment No. 35 to License No. DPR-28. Both 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 item (2) 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 19th day of April 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors