

BEFORE THE UNITED STATES NUCLEAR
REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

DOCKETED
11/1/89

No. 50-271

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Vermont Yankee Nuclear Power
Corp: Consideration of Issuance
of Amendment to Facility Operating
License and Opportunity for Prior
Hearing re: Proposed Amendment
Noticed at 54 FR 31120 (July 26, 1989)

VERMONT YANKEE NUCLEAR POWER CORP:
CONSIDERATION OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE AND
OPPORTUNITY FOR PRIOR HEARING

PETITION OF THE STATE OF VERMONT FOR LEAVE TO INTERVENE
AND REQUEST FOR AN EVIDENTIARY HEARING

NOW COMES the State of Vermont, by and through the undersigned counsel, and petitions for leave to intervene and for an evidentiary hearing in the above-styled cause pursuant to 10 CFR 2.714 and the notice published at 54 FR 31120 (July 26, 1989), concerning extension of the expiration date of the Operating License. In support of said petition it is stated:

I. RIGHT OF PETITIONER TO BE A PARTY.

The proposed license amendment involves the Vermont Yankee Power Station located in Vernon, Vermont. The amendment seeks to extend the expiration date of the Operating License from December 11, 2007 to March 21, 2012. The extension of the Operating License has a potentially significant effect on the environment of

the State of Vermont, and on the health, welfare and safety of its people, and the State of Vermont has a clear right to participate in the proceedings.

II. EXTENT OF PETITIONER'S PROPERTY, FINANCIAL, OR OTHER INTEREST IN THE PROCEEDING.

The State of Vermont has a responsibility to ensure that the environments of the State of Vermont, and the health, welfare and safety of its people are not compromised or adversely affected by an improvident granting of the requested license amendment. Issuance of the license amendment under the circumstances proposed could, if State health, safety and environmental concerns are not adequately addressed, result in a significant increase in risk to Vermont and its citizens from the Vermont Yankee plant.

III. POSSIBLE EFFECT OF ANY ORDER WHICH MAY BE ENTERED IN THE PROCEEDING ON THE PETITIONER'S INTEREST

As noted, the requested amendment involves a plant which is physically located in Vermont. Any order permitting the requested amendment would have both direct and indirect effect on Vermont and its citizenry.

IV. SPECIFIC ASPECTS OF THE SUBJECT MATTER AS TO WHICH PETITIONER WISHES TO INTERVENE.

The specific aspects of the subject matter of this proceeding which the State of Vermont seeks to address include but are not limited to:

1. Increased risks to public health and safety from aging of equipment beyond its intended design lifetime.

Nuclear equipment which was installed and/or operated during the construction period would exceed a 40-year life if the amendment request were granted, thus increasing the risk to the public.

2. Adverse affects on the environment of the State of Vermont resulting from not considering alternatives which are more environmentally suitable. The proposed extension causes generation of additional high- and low-level radioactive waste, additional safety risks and other additional environmental impacts. All of these impacts, plus the production of these resources necessary for addressing and mitigating these impacts, result in an adverse affect on the environment. Alternatives such as a natural gas fired plant, purchased power from Canada, energy conservation, or better-load management may be more environmentally suitable. Making a decision at this time to approve the proposed amendment before full consideration of alternative ways to meet future power needs, and before the likelihood of such future needs is clearly established, will tend to foreclose consideration of alternatives.
3. Adverse burden of high and low level radioactive wastes upon the State of Vermont. Despite federal plans for high level waste disposal, no confidence exists that such storage will come into existence. The license extension increases the amount of high

level waste which will be stored in-state indefinitely. Federal law requires that states hold ultimate responsibility for disposal (and potentially ownership) of low-level radioactive waste. Vermont is unwilling to accept disposal and potential ownership of low-level waste beyond that produced under the present licensed period.

4. Increased risks to public health and safety from reduction in the margins of safety for operation of the Vermont Yankee Power Station. The licensee has not established that there is an adequate margin of safety for operation of the plant for any period of time after that originally authorized in its operating license. The mere fact that it was authorized to operate until 2007 does not legally or technically mean it is safe to operate beyond that date, particularly since the plant was one of those that just met the ECCS criteria.

REQUEST FOR EVIDENTIARY HEARING

In its proposed amendment application the licensee identifies the following issues as directly relevant to the proposal:

1. Whether the operating life of the plant safety equipment will expire before the end of the proposed period of extension?
2. Whether the ongoing maintenance and inspection programs have been functioning properly and will be able to assure the integrity of safety systems during the proposed extension period?
3. Whether the margin of safety will be reduced by extending the operating life of the plant for the period of the extension request?
4. Whether the operating history of the plant and its equipment provides evidence that the plant can be operated safely for the additional time requested?
5. Whether the original design of the plant contained sufficient excess conservatism that reliance on that conservatism to authorize operation of the plant after 2007 makes it unnecessary to adopt any modifications in the design or operation of the plant?
6. Whether the plant will increase radiation exposures to the worker and surrounding population as it gets older and more of its parts become irradiated?
7. Whether there is safe and available capacity to store the nuclear wastes created by further operation of the plant?

All of these matters are matters of safety significance for which the licensee must present proof. In the initial operating license proceeding no findings of fact were made regarding the

safety of the plant or any of its systems beyond the date for which the license was sought. There are no findings by any tribunal that operation of this plant beyond 2007 will provide adequate protection for the public health and safety. Whether the extension will or will not result in the margins of safety falling below acceptable levels is the issue which the licensee must address with evidence in a hearing. It is their burden to prove what the margin of safety is in this plant, that the margin of safety exceeds the regulatory requirements and that extension of the operating life of the plant for an additional 10% will not bring the margin of safety below that level. Thus, at least for Vermont Yankee, there is no basis to treat a proposal to extend the operating life of the plant as having already been reviewed.

In addition, the Vermont Yankee plant was one of those plants for which the calculation of its capacity to meet the ECCS criteria indicated that it just qualified. Thus, contrary to the assertions in the application for the amendment, there is not a significant excess margin of safety built into this plant which may be used to absorb the additional risk created by extending the life of the plant for four years.

The above discussion indicates that the proposed license amendment does involve significant hazards considerations. The licensee's application concedes as much by identifying numerous safety related issues whose resolution must be made in order to determine whether the amendment should be issued. It assumes the answer to the question to argue that prior approval of the plant to operate until 2007 was the equivalent of approval of the plant

to operate until 2012 because the licensee and the Commission made a technical error in dating the license. The evidentiary findings only focussed on the year 2007. Thus the unreviewed safety question is whether there is reasonable assurance that the plant can operate with adequate protection for the public health and safety after 2007.

As noted on pages 1-2 above, even if the plant's safety equipment was designed to last forty years and there had been a finding to that effect, the date from which such forty years is to be counted is not the technically irrelevant date of when the plant got an operating license, but when did the equipment begin to experience deterioration. That date was far in advance of the issuance of legal permission to operate the plant and depending on the equipment involved could have been as early as the date the construction permit was issued. Thus, another unreviewed safety question is when will the safety equipment in the plant reach its forty year useful life?

While this discussion should indicate clearly that there are significant hazards considerations involved here and thus a hearing should be held, the Commission need not reach that issue to provide the result sought by the State of Vermont. Vermont seeks an evidentiary hearing on the proposed amendment which will predate action on the proposal. Due to the wise decision of Vermont Yankee management to seek the proposed amendment well in advance of any possible need for it, there is ample time to provide the hearing requested by Vermont and still provide Vermont Yankee with a timely answer. By postponing any decision on the

amendment as a matter of its discretionary power and because an early decision is unnecessary at this time, the Commission can avoid addressing the significant hazards question. Vermont does not care which route the Commission follows so long as the evidentiary hearing is held and the decision on the amendment application is based on the outcome of that hearing.

Finally, it is important to note that the environmental concerns raised by Vermont involve the need to consider alternatives to the proposed action. Consideration of these alternatives should occur prior to any final decision in order to assure that the decision itself does not bias the consideration of the alternatives.

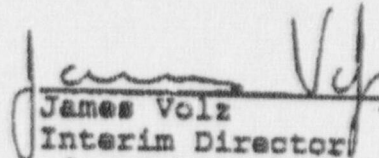
CONCLUSION

The State of Vermont believes that an evidentiary hearing should be held on the proposal to extend the operating life of the Vermont Yankee Nuclear Power Station prior to any action being taken on the proposed amendment. The State has a strong and long-recognized interest in the operation of this nuclear power plant within its borders. Its request to intervene should be granted and the evidentiary hearing should be held. At the appropriate time Vermont will identify with specificity all of its contentions and the bases for them.

The State of Vermont wishes to participate in this proceeding with respect to the issues set forth above as well as any other which may be raised by other parties hereto.

THE STATE OF VERMONT

By:


James Volz
Interim Director
for Public Advocacy
Department of Public Service
Special Assistant Attorney General

All pleadings related to this matter
should be served on:

James Volz
Vermont Department of Public Service
120 State Street
Montpelier, VT 05602

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BEFORE THE UNITED STATES NUCLEAR
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ATOMIC SAFETY AND LICENSING BOARD

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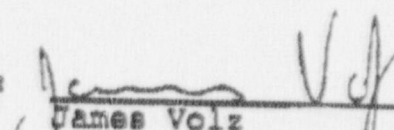
Vermont Yankee Nuclear Power)
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License and Opportunity for Prior)
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Noticed at 54 FR 31120 (July 26, 1989))

NOTICE OF APPEARANCE

The undersigned counsel hereby files this notice of
appearance in this proceeding.

Name: James Volz
Address: 120 State Street
Montpelier, Vermont 05602
Telephone No.: 802-828-2811
Admissions: State of Vermont
Party Represented: State of Vermont

Respectfully submitted,

By: 
James Volz
Special Assistant Attorney General
Special Counsel
Vermont Department of Public Service
120 State Street
Montpelier, Vermont 05602
(802) 828-2811

cc Parties

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CERTIFICATE OF SERVICE

I hereby certify that I served a copy of the foregoing
Petition to Intervene by causing a true copy hereof to be placed
in the United States mail, postage prepaid, addressed as follows:

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Office of the General Counsel-Bethesda
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

R.K. Cad, Esq.
Roper and Gray
225 Franklin Street
Boston, MA 02110

William Griffin Esq.
Attorney General's Office
State of Vermont
Montpelier, VT 05602

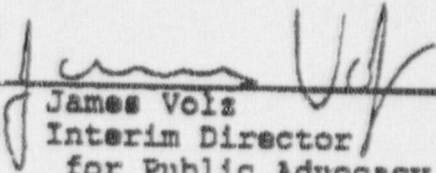
New England Coalition on Nuclear Pollution, Inc.
P.O. Box 545
Brattleboro, VT 05301

John Traficante
Department of the Attorney General
One Ashburton Place
Boston, MA 02108

Dated at Montpelier, Vermont this 22nd day of August, 1989.

VERMONT DEPARTMENT OF PUBLIC SERVICE

By: _____


James Volz
Interim Director
for Public Advocacy

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changes increase the control room staffing requirements and, therefore, will not reduce the margin of safety.

The NRC staff has reviewed the licensee's proposed no significant hazards determination and agrees with the licensee's analysis.

Furthermore, the Commission has provided guidance concerning the application of criteria for determining whether a significant hazards consideration exists by providing certain examples of actions involving no significant hazards consideration (51 FR 7751). As stated in example (vii), "A change to conform a license to changes in the regulations, where the license change results in very minor changes to facility operations clearly in keeping with the regulations." The proposed changes associated with this amendment are within the scope of this example.

Accordingly, the staff proposes to determine that the proposed changes involve no significant hazards consideration.

Local Public Document Room

location: University of Toledo Library, Documents Department, 2801 Bancroft Avenue, Toledo, Ohio 43606.

Attorney for licensee: Gerald Charnoff, Esquire, Shaw, Pittman, Potts and Trowbridge, 2300 N Street, NW, Washington, DC 20037.

NRC Project Director: John N. Hannon

Vermont Yankee Nuclear Power Corporation, Docket No. 50-271, Vermont Yankee Nuclear Power Station, Vernon, Vermont

Date of application for amendment: February 2, 1989

Description of Amendment request:

The proposed amendment deletes valves RHR-32, RHR-33 and Reactor Head Spray Check Valve 10-29 from Table 4.7.2.b of the Technical Specifications. This table pertains to primary containment isolation valves not subject to Type C leakage tests. RHR-32 and -33 are in a line that is closed off by a blank flange, thus, no longer require surveillance testing. Check Valve 10-29 is in a disconnected line that no longer serves any function.

Basis for proposed no significant hazards consideration determination: The Commission has provided standards for determining whether a significant hazards determination exists as stated in 10 CFR 50.92(c). A proposed amendment to an operating license involves no significant hazards considerations if operation of the facility in accordance with the proposed amendment would not: (1) Involve a significant increase in the probability or consequences of an accident previously

evaluated, or (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety.

The licensee has evaluated the proposed amendment against the standards in 10 CFR 50.92 and has determined the following:

The removal of the Reactor Vessel Head Spray Valves (RHR-32 and RHR-33) from Table 4.7.2.b of the Technical Specifications will simply remove the requirement to test the valves to ensure they will close if needed to isolate the primary containment. Since the valves are maintained closed and this amendment would remove the requirement to open the valves for these surveillances, further assurance is provided that the valves will remain in their isolated position. The removal of the check valve (10-29) from the Table will ensure continuity in the Technical Specifications in recognizing that the Reactor Head Spray function has been disconnected. Thus, the proposed change does not involve an increase in the probability or consequences of an accident previously evaluated. Operation of the RHR System is not reduced from existing requirements and is still bounded by the assumption used in the safety analysis, thus the proposed change does not create the possibility of a new or different kind of accident from any event previously evaluated. Elimination of subject surveillances will remove the requirement to open the motor-operated valves, which will ensure that the integrity of this penetration is maintained at all times. Thus, the proposed change involves no decrease in any plant margin of safety.

The NRC staff has reviewed the licensee's no significant hazards consideration determination and agrees with the licensee's analysis. Based on this review, the staff therefore determines that the proposed amendment does not involve a significant hazards consideration.

Local Public Document Room

location: Brooks Memorial Library, 224 Main Street, Brattleboro, Vermont 05301.

Attorney for Licensee: John A. Ritsher, Ropes and Gray, 225 Franklin Street, Boston, Massachusetts 02110.

NRC Project Director: Richard H. Wessman

✓ Vermont Yankee Nuclear Power Corporation Docket No. 50-271 Vermont Yankee Nuclear Power Station, Vernon, Vermont

Date of application for amendment: April 27, 1989 and June 23, 1989.

Description of amendment request:

The proposed amendment would extend the expiration date of the Operating License from December 11, 2007 to March 21, 2012.

Section 103.c of the Atomic Energy Act of 1954 authorizes the issuance of facility operating licenses for a period of up to 40 years. The current license term

for the Vermont Yankee facility began with the date of issuance of the construction permit, December 11, 1987, and ends on December 11, 2007. Accounting for the four years and three months required for plant construction, this represents an effective operating license term of only 35 years and 9 months.

Current NRC policy is to issue operating licenses for a 40-year period, commencing with the date of issuance of the operating license. For Vermont Yankee, this date was March 21, 1972. Accordingly, it is proposed that the Vermont Yankee operating license be amended to change the expiration date to March 21, 2012 consistent with current NRC policy and the originally engineered design life of the plant.

Basis for proposed no significant hazards consideration determination:

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92(c). A proposed amendment to an operating license involves no significant hazards considerations if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequence of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The licensee's analyses contained in the April 27, 1989 letter states the following:

The proposed amendment to the Vermont Yankee operating license does not involve any changes in the design or operation of the facility, but instead, only contemplates a change to the expiration date of the current license. This extension is within the range permissible by the Commission's regulations, specifically 10 CFR, Section 50.51. In addition, a finding of no significant hazards consideration is consistent with recent NRC actions on applications of this type. The proposed extension will have no significant impact on the safe operation of the plant or present an undue risk to the health and safety of the public.

The proposed license amendment to permit the 40-year operating life does not constitute a significant hazards consideration as defined in 10 CFR, Section 50.92 for the following reasons:

a. The proposed amendment does not involve a significant increase in the probability or consequences of any accident previously evaluated.

Age-related degradation was identified as the only mechanism having potential impact on the probability of occurrence of an accident previously evaluated. Changes in the population size and distribution were identified as the only parameter having

potential impact on previous conclusions concerning the consequences of an accident previously evaluated.

Conservatism have been incorporated in the design, construction, and operations of the Vermont Yankee facility. Furthermore, programs have been developed and implemented to: (1) evaluate and maintain the service life of structures, systems, and components; (2) conduct technical analyses for verifying the adequacy of structures, systems, and components; and/or (3) allow surveillance, maintenance, and inspection of the facility. Such programs assure that the Vermont Yankee facility will be operated as intended by its design and the Technical Specifications. That is, regardless of the age of the overall facility, these programs assure that the structures, systems, or components will be refurbished and/or replaced to maintain component functional capability and the margins of safety required by the Technical Specifications.

No changes to the above programs are necessary for assuring that during the proposed amendment term, Vermont Yankee continues to perform as intended by its design and Technical Specifications. Therefore, the proposed amendment will have no significant impact on plant safety.

In 1986, Vermont Yankee Nuclear Power Corporation conducted a study to update the population figures found in the Environmental Report and Final Safety Analysis Report and to project populations through the year 2032. As the report indicates, the projected population in the 50-mile area surrounding the Vermont Yankee facility is expected to remain unchanged during the proposed amendment term. There are no changes to the exclusion area boundaries, the increase in population in the Low Population Zone is projected as being negligible, and the nearest population center is expected to remain more than 1-1/3 times the current five-mile Low Population Zone (LPZ) radius from the facility as required by 10 CFR 100.11(a)(3). Based on the results of this study, the off-site exposures from releases due to postulated accidents are expected to remain well within the limits set forth in 10 CFR Part 100.

Because there will not be significant changes in the population and its distribution surrounding the plant, and Vermont Yankee Nuclear Power Corporation will continue to operate the plant in accordance with its design and Technical Specifications, the potential radiological consequences of an accident previously evaluated remain unchanged.

The proposed amendment will not result in an increase in the probability or the consequences of an accident previously evaluated in the PSAR because: (1) facility operations will be continued in accordance with the facility's approved design and Technical Specifications, and (2) changes to the population and distribution surrounding Vermont Yankee are expected to be negligible and will not impact on the previously determined LPZ boundary.

b. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Conservatism have been incorporated in the design, construction, and operations of Vermont Yankee. Furthermore, programs have been developed and continue to be implemented to assure that the facility is operated as intended by design and in accordance with the Technical Specifications. In particular, the In-Service Inspection/Testing, Environmental Qualification, and Maintenance Programs assure that facility structures, systems, and components will be refurbished or replaced, as appropriate. That is, regardless of the age of the facility, these programs ensure that structures, systems and components are refurbished and/or replaced to maintain component functional capability and the margins of safety required by the Technical Specifications. No changes to these programs are necessary for assuring that Vermont Yankee will continue to perform as designed and in accordance with the Technical Specifications during an additional four years and three months of operation. Therefore, there is no possibility that a different type of accident is created.

c. The proposed amendment does not involve a significant reduction in a margin of safety.

The margins of safety identified in the Technical Specifications have been incorporated into the facility's design, construction, and operations. With respect to operations, such margins are the basis for the facility operating and emergency procedures, as well as the Vermont Yankee In-Service Inspection/Testing, Environmental Qualification, and Maintenance Programs.

The inspection, surveillance, and maintenance requirements of these programs assure that, regardless of the age of the overall facility, the functional capabilities of structures, systems, and components will be maintained throughout the life of the facility through refurbishment and/or replacement, as appropriate, to meet the Technical Specifications. No changes to these programs are necessary to assure that during the additional four years and three months of operation, Vermont Yankee will continue to perform as intended by its design and the Technical Specifications.

Therefore, the proposed amendment does not reduce the margin of safety as defined in the Technical Specification bases.

Conclusion

Based on the above considerations, we contend that the extension of Vermont Yankee's operating license in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of accidents previously considered, nor create the possibility of a new or different kind of accident, and will not involve a significant reduction in a safety margin. Therefore, we conclude that there is no significant hazards consideration associated with the proposed amendment to the Vermont Yankee operating license.

The staff has reviewed the licensee's analysis and agrees with it. Therefore, we conclude that the amendment satisfies the three criteria listed in 10 CFR 50.92. Based on that conclusion the

staff proposes to make a no significant hazards consideration determination.

Local Public Document Room
location: Brooks Memorial Library, 224 Main Street, Brattleboro, Vermont 05301.

Attorney for licensee: R. K. Gad, III, Esq., Ropes and Gray, 225 Franklin Street, Boston, Massachusetts 02110.

NRC Project Director: Richard H. Wessman

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

During the period since publication of the last biweekly notice, the Commission has issued the following amendments. The Commission has determined for each of these amendments that the application 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.

Notice of Consideration of Issuance of Amendment to Facility Operating License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing in connection with these actions was published in the Federal Register as indicated. No request for a hearing or petition for leave to intervene was filed following this notice.

Unless otherwise indicated, the Commission has determined that these amendments satisfy the criteria for categorical exclusion in accordance with 10 CFR 51.22. Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared for these amendments. If the Commission has prepared an environmental assessment under the special circumstances provision in 10 CFR 51.12(b) and has made a determination based on that assessment, it is so indicated.

For further details with respect to the action see (1) the applications for amendments, (2) the amendments, and (3) the Commission's related letters, Safety Evaluations and/or Environmental Assessments as indicated. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document rooms for the particular facilities involved. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear