

**NORTHEAST UTILITIES**

THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

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December 6, 1984

Docket No. 50-423  
B11392

Director of Nuclear Reactor Regulation  
Mr. B. J. Youngblood, Chief  
Licensing Branch No. 1  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Reference: (1) W. G. Counsil letter to B. J. Youngblood, "Qualification of the Turbine Building Vent," dated October 23, 1984.

Dear Mr. Youngblood:

Millstone Nuclear Power Station, Unit No. 3  
Qualification of the Turbine Building Vent

In Reference (1), Northeast Nuclear Energy Company (NNECO) provided a response to a question concerning qualification of the turbine building vent. Attached is the additional information concerning qualification of the turbine building vent. The attached information was discussed and accepted by your Mr. N. Chokshi, Structural Engineering Branch during a telecon with a NNECO representative on November 28, 1984. Therefore, this concern is considered fully resolved.

If there are any questions, please contact our licensing representative directly.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY  
et. al.

BY NORTHEAST NUCLEAR ENERGY COMPANY  
Their Agent

W.G. Counsil

W. G. Counsil  
Senior Vice President

W.F. Fee

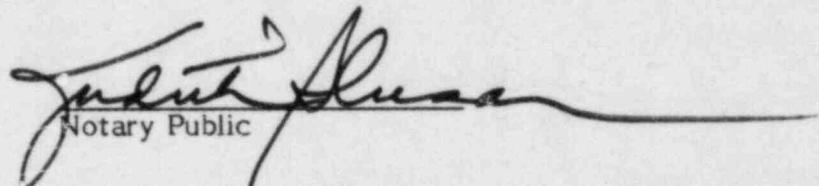
By: W. F. Fee  
Executive Vice President

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STATE OF CONNECTICUT      )  
                                ) ss. Berlin  
COUNTY OF HARTFORD      )

Then personally appeared before me W. F. Fee, who being duly sworn, did state that he is Executive Vice President of Northeast Nuclear Energy Company, an Applicant herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Applicants herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

  
Notary Public

My Commission Expires March 31, 1988

Attachment I

Qualification of the Turbine Building Vent

Response (10/84)

The ventilation ductwork associated with safety related portions of the Auxiliary Building Ventilation System (ABVS) is seismically qualified. This ductwork runs through the auxiliary building outside to the turbine building where it attaches to the turbine building vent stack which is not seismically qualified.

The turbine building stack is installed to ensure proper dispersion of potentially radioactive ventilation exhaust gases to the environment during normal operation. The exhaust gases will be passed through filtration units prior to discharge to the stack if high radiation conditions are sensed in the ABVS. Credit for the stack height is not included in dose calculations.

The turbine building superstructure and vent stack are steel framed structures with metal siding. The steel frame of the turbine building and vent stack have been designed to withstand tornado winds having a velocity of 360 mph. The turbine building frame has been analyzed to resist seismic forces, and the resulting stresses are considerably less than the governing load case of tornado winds. As such, the stack and the support interface with the turbine building has considerable inherent seismic capability and it is not considered credible for a design basis seismic event to result in stack collapse which would block ventilation flow.

Additional Information (12/84)

In the above response it has been stated that the vent stack and turbine building were similar steel framed structures. The turbine building was analyzed to resist seismic forces and the resulting stresses were considerably less than the governing load case of tornado winds. An inference that the same analogy applies to the vent stack was made. The purpose of this additional information is to quantify the effects of seismic forces on the vent stack.

The vent stack is supported from two locations off the turbine building, at elevation 101' and 129', and the top of the stack extends to elevation 156'-8". The mass of the stack is such that it can be decoupled from the turbine building. The horizontal frequency of the vent is approximately 10 cps. Seismic accelerations from the turbine building at elevation 129', which correspond to the frequency of the stack, were used as horizontal input. This evaluation indicated that the design tornado shear forces are four times greater than the shear forces resulting from the analysis for the SSE. The above verifies that tornado winds are indeed the governing load case for this structure.