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MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

November 22, 1983
PY-CEI/NRR 0083 L

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

Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Transmission Tower Design

Dear Mr. Youngblood:

This letter provides additional information regarding the design of the transmission towers for the 345 kV lines along the 1.1 mile common right-of-way as they exit the Perry Transmission station.

The Perry transmission towers have been designed for worst case environmental conditions and tested beyond the governing National Electric Safety Code requirements. The analysis and testing to this code show the structural failure of one tower will not result in the loss of the preferred power supply to the on site electrical distribution system. The Perry design meets the requirements of General Design Criterion 17.

Additionally, the NRC staff reviewer requested an evaluation of the structural capability of the tower design to withstand a specific hypothetical failure scenario. The postulated failure mode was at the base of one tower and the consequences on the adjacent transverse tower were to be evaluated. Structural analyses were performed for this scenario for two representative tower designs. For both cases, the adjacent tower would be impacted by the postulated falling tower but would support the weight of the fallen tower. The results show that the structural capability of the towers are such that the specified failure of one tower will not cause failure of all of the transverse towers.

If you have any questions, please let me know.

Very truly yours,

Murray R. Edelman
Vice President
Nuclear Group

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cc: Jay Silberg, Esq.
John Stefano
Max Gildner

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