



Westinghouse
Electric Corporation

Energy Systems

Nuclear Technology Division

Box 355
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September 12, 1995
NTD-NRC-95-4495
NTD-NSRLA-OPL-95-313

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Theodore R. Quay:

Subject: Request for Opinion

This is a request for opinion similar to a previous request that we made in August of 1994 (Re: NTD-NRS-94-4277/NTD-NSRLA-OPL-94-226, N.J. Liparulo, Westinghouse, to W. Reckley, NRC, dated August 26, 1994) to which the NRC responded in September of 1994 (Re: Opinion Letter Regarding Licensability of Small Increase In Rated Thermal Power For Units Similar to SNUPP Design, W.T. Russell, NRC, to N.J. Liparulo, Westinghouse, dated September 22, 1994). Copies of these letters are attached for ease of reference.

Westinghouse Electric Corporation is submitting a revised plant proposal to the Taiwan Power Company for construction of a new plant in Lungmen, Taiwan. The Taiwan Power Company has requested bidders to demonstrate that their proposed plant design has a Final Design Approval. While the Lungmen plant proposed by Westinghouse is similar to plants which have received regulatory approval, the specific proposed Lungmen plant design does not have documented regulatory approval.

Alternatively, the Taiwan Power Company has suggested that an opinion letter from the USNRC concerning the licensability of another plant design similar to the proposed Lungmen plant would be helpful in demonstrating compliance with its final design approval requirement.

The U.S. Nuclear Regulatory Commission is respectfully requested to provide an opinion concerning the licensability of an increase in core power of an existing domestic plant. Westinghouse would use this opinion to show the Taiwan Power Company that the proposed plant at Lungmen, which is similar in design to a domestic plant with a slight increase in core power, would be licensable.

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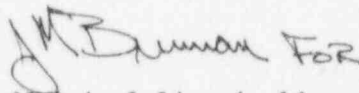
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The proposed Lungmen plant would be similar to the South Texas plant uprated 0.6%. The South Texas plant has been licensed at 3800 MWt. The proposed Lungmen plant would have a core power level of 3823 MWt. The proposed Lungmen plant is essentially a Sizewell B plant in England (similar to the SNUPPs plants) with the South Texas reactor vessels internals with its 14 foot core length.

Westinghouse performed the principal analyses supporting the power levels at South Texas. It is our opinion that an increase of 0.6% in core power to a rated value of 3823 MWt is acceptable with respect to plant control and protection, the designated safety limits, and the design of systems and components.

It is requested that the USNRC provide an opinion letter to Westinghouse indicating the licensability of increasing the reactor core power of a plant similar to the South Texas units, as described above, from 3800 MWt to 3823 MWt. The objective of the opinion letter is to demonstrate to Taiwan Power Company that there are no technical or licensing barriers for this small increase in core power.

Thank you for your attention to this matter. We would appreciate a response by 9/28/95. If you have any questions, please call me.



Nicholas J. Liparulo, Manager
Nuclear Safety Regulatory and Licensing Activities

LVT/bbp

cc: Kevin Bohrer/NRC(12H5)
Michael X. Franovich/NRC
Thomas J. Kenyon/NRC
William Reckley/NRC



Westinghouse
Electric Corporation

Energy Systems

Box 355
Pittsburgh Pennsylvania 15230-0355

August 26, 1994

NTD-NRC-94-4277
NTD-NSRLA-OPL-94-226

Mr. William Reckley
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Request for Opinion

Dear Mr. Reckley:

Westinghouse Electric Corporation has submitted a new plant proposal to the Taiwan Power Company for construction of a new plant in Lungmen, Taiwan. The Taiwan Power Company has requested bidders to demonstrate that their proposed plant design has a Final Design Approval. While the Lungmen plant proposed by Westinghouse is similar to plants which have received regulatory approval, the specific proposed Lungmen plant design does not have documented regulatory approval.

Alternatively, the Taiwan Power Company has suggested that an opinion letter from the USNRC concerning the licensability of another plant design similar to the proposed Lungmen plant would be helpful in demonstrating compliance with its final design approval requirement.

The U.S. Nuclear Regulatory Commission is respectfully requested to provide an opinion concerning the licensability of an increase in core power of an existing domestic plant. Westinghouse would use this opinion to show the Taiwan Power Company that the proposed plant at Lungmen, which is similar in design to domestic plant with a slight increase in core power, would be licensable.

The proposed Lungmen plant is based on the Sizewell B plant in England, which is similar in design to the SNUPPS plants (Wolf Creek and Callaway). The Wolf Creek and Callaway units have each been licensed to a core power level of 3565 MWt, representing an increase of approximately 4.5% above their original licensed core power. The proposed Lungmen plant has a core power level of 3581 MWt, or about 0.5% higher than the current rating of the SNUPPS units.

Westinghouse performed the principal analyses supporting the uprated power levels at both Wolf Creek and Callaway. It is our opinion that an increase of 0.5% in core power to a rated value of 3581 MWt is acceptable with respect to plant control and protection, the designated safety limits, and the design of systems and components. The Wolf Creek and Callaway up-ratings were limited to 3565 MWt to avoid re-performing the Safety Analyses that were already performed, not due to encountering any specific limitation.

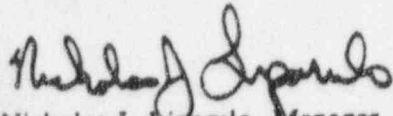
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August 26, 1994
NTD-NRC-94-4277
NTD-NSRLA-OPL-94-226

It is requested that the USNRC provide an opinion letter to Westinghouse indicating the licensability of increasing the reactor core power of the SNUPPS units (Wolf Creek and Callaway) from 3565 MWt to 3581 MWt. The objective of your opinion letter is to demonstrate to Taiwan Power Company that there are no technical or licensing barriers for this small increase in core power.

Thank you for your attention to this matter. If you have any questions, please call me.



Nicholas J. Liparulo, Manager
Nuclear Safety Regulatory and Licensing Activities



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20540-0001

September 22, 1994

Mr. Nicholas J. Liparulo, Manager
Nuclear Safety Regulatory and Licensing Activities
Westinghouse Electric Corporation
P.O. Box 355
Pittsburgh, Pennsylvania 15230-0355

SUBJECT: OPINION LETTER REGARDING LICENSABILITY OF SMALL INCREASE IN RATED
THERMAL POWER FOR UNITS SIMILAR TO SNUPPS DESIGN

Dear Mr. Liparulo:

In your letter of August 26, 1994, you requested that the U. S. Nuclear Regulatory Commission (NRC) issue an opinion letter to Westinghouse indicating the licensability of a nuclear power facility similar to the Standardized Nuclear Unit Power Plant System (SNUPPS) facilities, except with a maximum core power of 3581 megawatts-thermal (Mwt). The NRC has issued operating licenses to two domestic SNUPPS facilities: the Callaway Plant and Wolf Creek Generating Station. Both units were originally licensed with a maximum core power of 3411 Mwt and were subsequently issued license amendments to increase the maximum core power to 3565 Mwt.

Design basis analyses for the licensing of nuclear power facilities rarely determine the absolute maximum allowable value for operating parameters such as core power level. Instead, the analyses assume values for a large number of parameters related to normal plant operation and accident conditions. The design basis analyses demonstrate that a plant's response to anticipated transients and design basis accidents meet minimum regulatory criteria established to protect public health and safety. The assumptions made in the analyses become operating limits as part of the licensing process. Additional conservatisms are introduced by the analytical models and methodologies used to demonstrate compliance with regulatory criteria. In addition, the analyses often include conservative allowances for uncertainties, limits for protection of equipment, and margins for operating flexibility. NRC has issued many license amendments to revise these limits found to introduce undue operational or financial burdens. The submittal and subsequent NRC approval of such amendments demonstrate that revisions to initial design basis assumptions can be found to be acceptable. The increases in maximum allowable core power for Callaway and Wolf Creek are examples of this type of revision to limits in the operating licenses.

The above areas of conservatism in determining operating limits and the NRC review of the Callaway and Wolf Creek initial license applications and amendments to increase the allowable core power, indicate that it is reasonable that a plant similar in design to the SNUPPS units could be licensed with a maximum core power of 3581 Mwt.

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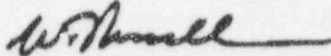
Mr. Nicholas J. Liparulo

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Although the proposed plant is said to be similar to the SNUPPS design, licensability would, of course, depend on specific reviews and inspections to ensure that all applicable regulatory requirements, including those developed after the licensing of Wolf Creek and Callaway, were satisfied. Since this opinion is offered without such reviews or inspections, it should not be construed as approval or endorsement of similar changes for domestic facilities. This opinion is also limited to the hypothetical licensing of such a facility and does not in any way address the capabilities of power conversion systems.

Address any questions regarding this opinion to Mr. William Reckley at (301) 504-1314.

Sincerely,



William T. Russell, Director
Office of Nuclear Reactor Regulation