January 7, 2000

Mr. J. P. O'Hanlon
Senior Vice President
Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, VA 23060

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2 RE: REQUEST FOR ADDITIONAL INFORMATION RELATED TO CONTROL ROOM HABITABILITY AND LICENSE AMENDMENT REQUEST (TAC NOS. MA5376 AND MA5377)

Dear Mr. O'Hanlon:

The purpose of this letter is to request additional information so that we may continue to review your license amendment request dated May 3, 1999, related to control room habitability.

Our questions are provided in the Enclosure. The questions were discussed with Tom Shaub of your licensing staff on December 27, 1999, and he agreed to provide a response to these questions by April 1, 2000.

Sincerely,

/RA/

Gordon Edison, Senior Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION
NORTH ANNA
CONTROL ROOM HABITABILITY AMENDMENT REQUEST
TAC NOS. MA 5376 AND MA5377

The following information is needed to confirm that the inputs, assumptions, and methodologies used in the North Anna design basis accident dose assessments are appropriate to demonstrate compliance with applicable portions of 10 CFR Part 50 and 10 CFR Part 100. The response to the first question will enable staff to perform a confirmatory calculation of the main steam line break analysis. Questions related to the meteorological data are to ensure that the data are of high quality and representative of long-term overall site conditions. Questions about the inputs and assumptions used are to ensure acceptable merging of engineering-related considerations (e.g., effluent release characteristics) with meteorological characteristics to estimate atmospheric dispersion for each release scenario. The final question addresses confirmation of the most limiting scenario for the steam generator tube rupture analysis.

1. Provide the unaffected steam generator steaming rates for the main steamline break (MSLB).

2. Were all data used in the analysis collected under Regulatory Guide 1.23, "Onsite Measurement Programs," guidelines? If not, how were the data collected that did not meet the recommendations of Regulatory Guide 1.23 and why are the collection methodologies/ conditions acceptable?

3. During the period of data collection, was the tower area free from obstructions (e.g., structures, trees) and micro scale influences to ensure that the data collected were representative of the overall site area?

4. What quality assurance checks were performed on the meteorological measurement systems prior to, and during the period of collection to assure that the data are of high quality? What additional checks were performed on the data following collection and prior to input into the atmospheric dispersion calculations?

5. Page 13 of 37 states that the meteorological data used in the analysis are from 1989 through 1993, inclusively. Provide a copy of the meteorological data used to calculate the X/Q values. Data should be provided in the format specified in Appendix A to Section 2.7, "Meteorology and Air Quality," of draft NUREG-1555, "Environmental Standard Review Plan." A copy of this format is attached. Otherwise, provide the data electronically in the format used to input it into the ARCON96 computer calculations.

6. Provide a list of each of the other inputs to the ARCON96 calculations. Describe the assumptions and bases for selection of the input values so as to result in the limiting dose.

7. Page 21 of 37 notes that the affected steam generator X/Q values are smaller than the values for the unaffected generators because of the higher discharge velocity. Provide a further description of the assumptions, bases, and calculations to determine that the higher

8. discharge velocity from the affected steam generators would result in a lower X/Q and dose than for the unaffected steam generator. While we agree that jet rise can be a factor, please address the impact of a release without loss of offsite power such that releases are from the secondary plant (e.g., air ejector). What degree of assurance is there that the affected steam generator release location will maintain a high vertical velocity over time? What assumptions are made and what are the bases of the assumptions with respect to wind and structural effects on the vertical velocity?

Mr. J. P. O'Hanlon
Virginia Electric and Power Company

North Anna Power Station
Units 1 and 2

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