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**Vogtle Project**

May 23, 1985

Director of Nuclear Reactor Regulation  
Attention: Ms. Elinor G. Adensam, Chief  
Licensing Branch #4  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

File: X7BC35  
Log: GN-625

REF: BAILEY TO DENTON, GN-598, ENCLOSURE B, DATED 5/6/85  
REF: BAILEY TO DENTON, GN-605, DATED MAY 10, 1985

NRC DOCKET NUMBERS 50-424 AND 50-425  
CONSTRUCTION PERMIT NUMBERS CPPR-108 AND CPPR-109  
VOGTLE ELECTRIC GENERATING PLANT - UNITS 1 AND 2  
REQUEST FOR ADDITIONAL INFORMATION: Q430.72

Dear Mr. Denton:

Attached for the review of your staff is a revision to the response to Q430.72. This revision supercedes the responses provided in the referenced letters.

If your staff requires any additional information, please do not hesitate to contact me.

Sincerely,

J. A. Bailey  
Project Licensing Manager

JAB/msp  
Attachment

xc: List Attached

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PDR ADOCK 05000424  
A PDR

*Boo!*  
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Mr. Denton:  
May 23, 1985  
Page two

xc: D. O. Foster  
R. A. Thomas  
J. E. Joiner, Esquire  
B. W. Churchill, Esquire  
M. A. Miller  
B. Jones, Esquire (w/o att.)  
L. T. Gucwa  
G. Bockhold, Jr.  
T. Johnson (w/o att.)  
D. C. Teper (w/o att.)  
L. Fowler

0269m

Calculations have been performed to determine the effects of running the VEGP charging pumps at the degraded voltage setting (88%). The effect of running at this reduced voltage would be a temperature rise of the insulation system of the motor and the motor would run at a lower speed. The effects of running at the reduced voltage are a temperature rise of 85°C and speed of 1755 RPM (synchronous speed is 1800 RPM and operating speed is 1771 RPM).

The insulation system used in the GAE charging pump motors is thermalastic epoxy insulation designed to NEMA Class F requirements. Per Section MG1-20.40 of the NEMA standards, the maximum temperature rise by resistance based on an ambient temperature of 40°C with 1.15 or higher service factor for Class F insulation systems is 105°C. The temperature rise of the GAE charging pump motors at 88% voltage is 85°C, which is lower than the maximum temperatures allowed by NEMA Standards for Class F insulation.

A further evaluation has been performed to determine the effect of running the VEGP charging pumps at a degraded voltage of 86.5%. The result of this evaluation is that the maximum temperature rise would be 90°C. As can be seen in the previous discussion, this is lower than the maximum temperatures allowed by NEMA standards for Class F insulation.

Attached are flow curves for comparison of the vendor minimum curve, accident analysis curve and the curve resulting from the degraded voltage. As can be seen, the degraded voltage curve which corresponds to 86.5% voltage and 1753 RPM) is acceptable with respect to the analysis curve.

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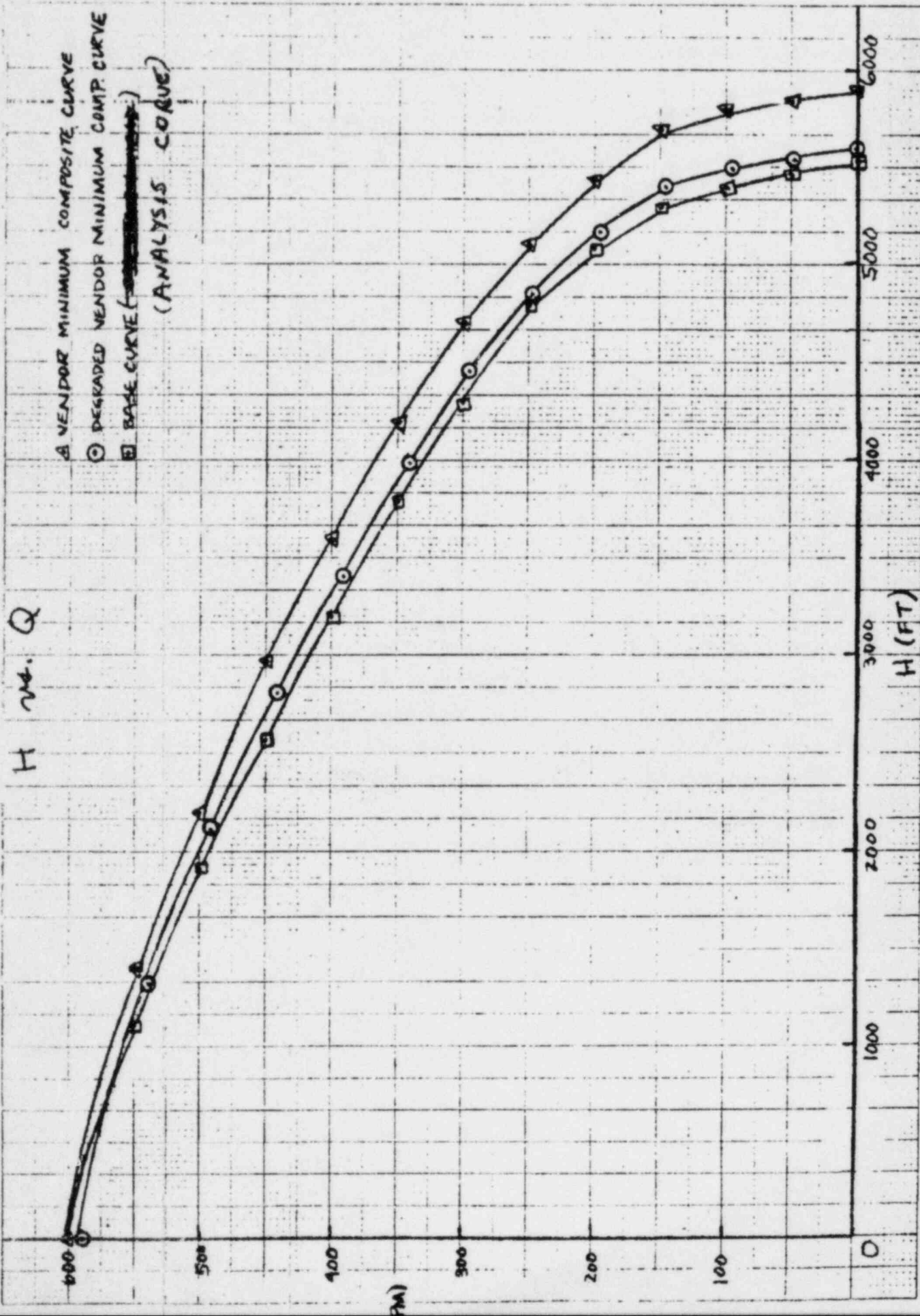


FIGURE 1  
COMPARISON OF VENDOR, DEGRADED VENDOR AND BASE CURVES