

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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October 7, 1985

Docket No. 50-423
F0865A

Dr. Thomas E. Murley
Regional Administrator
U. S. Nuclear Regulatory Commission
Region 1
631 Park Avenue
King of Prussia, PA 19406

Dear Dr. Murley:

Millstone Nuclear Power Station, Unit No. 3
Reporting of Potential Significant Deficiencies
In Accordance with 10CFR 50.55(e):
Diesel Generator Brush Rigging Failure (SD-88)

In a September 5, 1985 telephone conversation between your Mr. T. Rebelowski and our Mr. P. J. Quinlan, Northeast Nuclear Energy Company (NNECO) reported a potential significant deficiency in the construction of Millstone Unit No. 3 in accordance with 10CFR 50.55(e). The potential significant deficiency involved the failure of the brush rigging on the "B" diesel generator during startup testing. The failure occurred on the transition piece which connects the brush support to the structure connected to the generator frame (see Figure 1).

An engineering evaluation determined that the failure was due to a design/fabrication error which allowed the hole for the brush rod to be drilled too deep leaving only 1/16 inch of material between the bottom of the hole and the opposing face of the piece. The lack of reinforcement material resulted in a high stress concentration which caused a fatigue failure in the transition piece when exposed to low vibration levels. Although vibration data was not available for the assembly before failure, vibration levels on the "A" diesel generator and the "B" diesel generator using an identical replacement part were relatively low such that a failure would not be expected if the piece had adequate reinforcement material between the bottom of the hole and the opposing face.

If this failure had occurred when the diesel generator was performing its intended safety function, an unacceptable plant condition may have developed. Therefore, we consider this to be a significant deficiency in the final construction of Millstone Unit No. 3 in accordance with 10CFR 50.55(e).

Subsequent to this evaluation, a one piece support rod was designed and installed on both diesels. The new design eliminates the stress concentration effect and utilizes a high strength carbon steel material with favorable ductility characteristics.

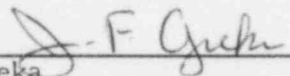
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We consider this to be our final report for SD-88. We trust that the above information satisfactorily responds to your concerns. This letter is being provided on October 7 rather than October 4, as discussed with your Mr. T. Rebelowski.

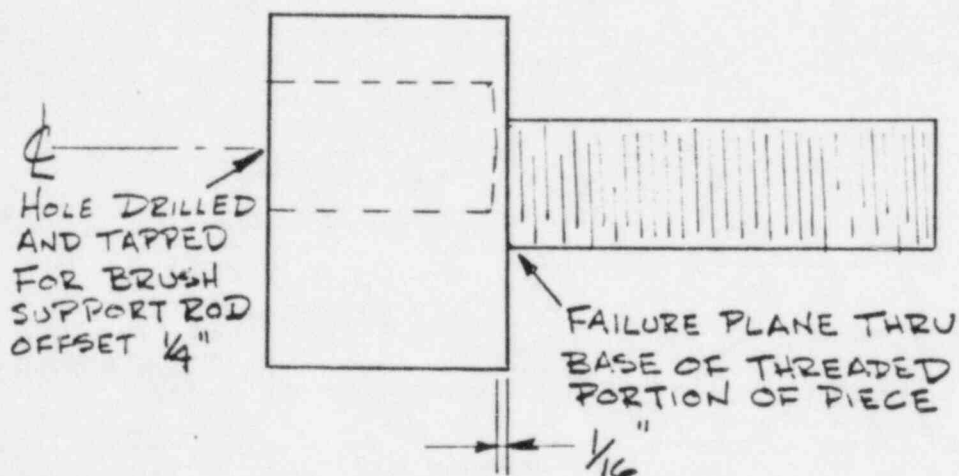
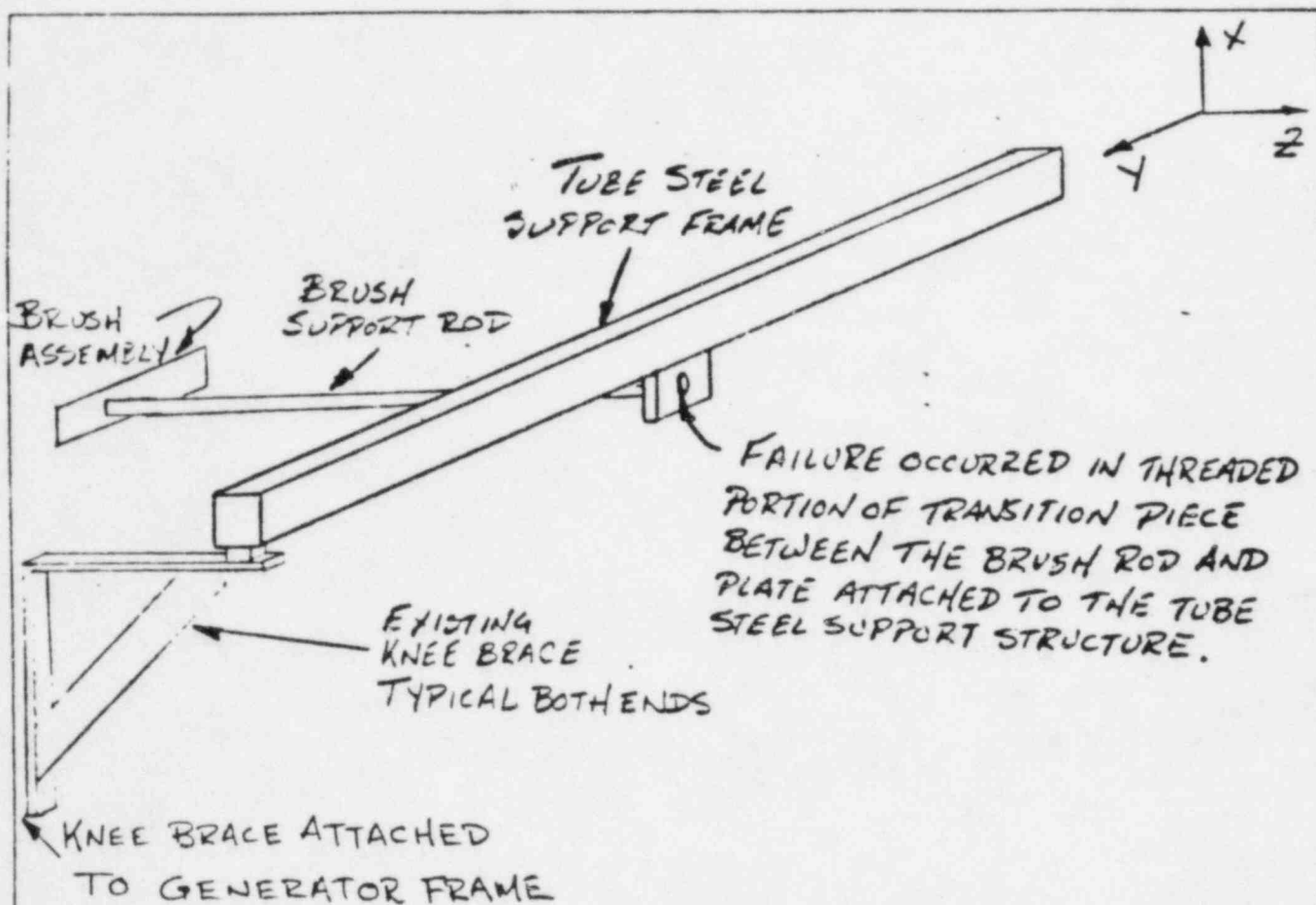
Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. Opeka
Senior Vice President

cc: Mr. J. M. Taylor, Director
Division of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



DETAIL OF TRANSITION PIECE

FIGURE 1 (SD-88)