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December 6, 1983

WRITER'S DIRECT DIAL NUMBER
822-1090

Mr. Samuel J. Chilk
Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

In the Matter of
Metropolitan Edison Company
(Three Mile Island Nuclear Station, Unit No. 1)
Docket No. 50-289 (Restart)

Dear Mr. Chilk:

Please find enclosed a copy of the following document, which includes information potentially relevant and material to matters under adjudication in the plant design and procedures phase of this proceeding, which is now before the Commission: Letter 5211-83-346, November 23, 1983, H. D. Hukill, GPU Nuclear, to J. F. Stolz, NRC, EFW Flow Devices (D/P) Testing.

Respectfully submitted,

Thomas A. Baxter

Thomas A. Baxter
Counsel for Licensee

TAB:jah

Enclosure

cc: Service List

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PDR ADOCK 05000289
G PDR

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of

METROPOLITAN EDISON COMPANY

(Three Mile Island Nuclear
Station, Unit No. 1)

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Docket No. 50-289
(Restart)

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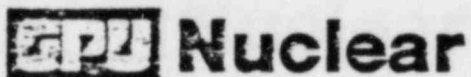
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Writer's Direct Dia. Number

November 23, 1983
5211-83-346

Office of Nuclear Reactor Regulation
Attn: J. F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
EFW Flow Devices (D/P) Testing

In our submittal of August 25, 1983 (5211-83-231), GPUN described the differential pressure (d/p) flow measuring system using annubars for the Emergency Feedwater System. In item III.F of the enclosure to that letter, we indicated that "the flow instrumentation are reliable and accurate and are designed to monitor the full range of system flow requirements". Recent tests performed on the EFW system in conjunction with OTSG testing indicated oscillations at low flow conditions (less than approximately 100 gpm) outside the $\pm 10\%$ criteria. GPUN's preliminary evaluation concludes that cavitation on the outlet of the feedwater flow control valve during low flow conditions caused the oscillations. Tests indicate that at high flow conditions (above 400 gpm) the d/p flow instruments are within $\pm 10\%$.

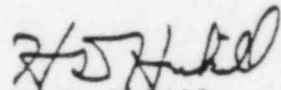
We have concluded that the oscillations at low flows do not affect the functional capability of the EFW system or the ability of the operator to take proper action and are, therefore, acceptable for the following reasons:

- a. Emergency feedwater flow is initiated automatically on loss of all RCS pumps or both feedwater pumps. Should initiation occur, the accuracy of the instrument would be within allowable limits for high flows to confirm that EFW flow is sufficient. For low flow conditions the flow instrument confirms the proper initiation of EFW (i.e. flow is occurring). Accuracy of flow rate is not necessary at low flows. In addition, EFW flow would be automatically controlled by the RCS on steam generator level, not EFW flow rate. Based on this, the EFW flow devices will provide indication to the operator that the system is functioning.

- b. During manual takeover of the emergency feedwater system, the operator does not control feed flow based on this flow indicating instrument alone. Emergency Feedwater continues to be controlled based on OTSG level and pressure (level to prevent over/under-filling and pressure to prevent over-cooling). The operator's attention is focused on these instruments when regulating flow. The emergency feedwater flow indication provides only one positive means of verifying that flow is being delivered to the steam generators; it is not relied upon to regulate flow.

This clarification describes the EFW d/p flow system as currently installed and tested. Therefore, GPUN concludes that the EFW flow indicating system is acceptable and meets the requirements of NUREG 0737 and our commitment reflected in the Partial Initial Decision of December 14, 1981. However, during the Power Escalation testing data will be collected and used to assist the operators in understanding how the EFW flow devices are expected to perform under various EFW flow conditions.

Sincerely,


H. D. Hukill
Director of TMI-1

HDH:LWH:vjf:jrg

cc: J. Van Vliet
R. Conte