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## NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

February 14, 1980

Mr. Albert G. Daniels P. O. Box 415 Winnsboro, SC 29180

Dear Mr. Daniels:

On December 11, 1979 you sent letters to Chairman Ahearne and Mr. Denton requesting comments on two other letters, a December 7, 1979 letter from Dr. John Kemeny to you, and a December 11, 1979 letter from you to Dr. Kemeny. Since you and I have already exchanged correspondence regarding reactor vessel level measurements, Chairman Ahearne and Mr. Denton asked that I respond to your letters to them.

Dr. Kemeny's letter to you states that his Commission considered recommending a water level indicator and decided that this might be unreliable, noting that very complex steam and water flow patterns could make the indicator unreliable. Your response to Dr. Kemeny points out that there were periods of minimum agitation in the TMI reactor vessel when a level gauge would have given reasonably correct and crucial information to the operators, and that corrective action could have been taken. Dr. Kemeny is correct in being concerned that complex flow patterns and agitation could give misleading indications. You are correct in believing that a well-designed system for level detection could provide crucial information.

As my letter to you on December 18, 1979 indicated, the NRC staff has established a requirement that instrumentation be added to nuclear power plants to provide an indication of reactor vessel level. The efforts I outlined in that letter are proceeding, and we remain steadfast in our resolve to reach the objective of having reactor vessel water level indication. We agree with you on the importance of this information. We also see the merits of instruments which can provide measurement of a full range of temperatures, noted by Dr. Kemeny, and have required that these be installed on nuclear power plants.

Dr. Kemeny briefly mentioned his opinions on control panel reorganization and the display of the most important indicators. The NRC has underway a task to evaluate control room designs from a human factors viewpoint, and another task to display the most critical parameters for the operators, as suggested by Dr. Kemeny. We expect reactor vessel water level indication to be among those parameters.

Your letter to Dr. Kemeny also suggests that some consideration be given to weighing the reactor vessel as a means of detecting water losses. Since you so kindly sent me copies of correspondence between yourself and the Babcock and Wilcox Company, I see that this does not need to be addressed further.

I appreciate your intense interest and comprehensive study of this matter. If the above response to your requests is not adequate, please let me know.

Sincerely,

Richard P. Denise, Acting Assistant Director for Reactor Safety Division of Systems Safety

## POOR ORIGINAL,

Mr. Albert G. Daniels P. O. Box 415 Winnsboro, SC 29780

Dean Mr. Daniels:

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Gent. al Files
RS Rdq
NRR Rdg
PDR
LPDR

H Denton

NSIC

E. Case

H. Berkow/W. Russell

D. Ross

D. Vassallo

D. Eisenhut

G. Ertter (08032)

T. Schultz

M. Groff (08032, NRR 3586, NRR 3481) SECY 79-3328 (3)

R. Mattson

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Mr. Albert G. Daniels

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Original Signed By Richard P. Denise

Richard P. Denise: Acting Assistant Director for Reactor Safety Division of Systems Safety

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