

Nathan M. Newmark  
Urbana, Illinois 6180

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ON: (Must Be Unclassified)					
a review of PSAR including Amdts		REFERRED TO			
20 of Three Mile Island Unit 1		DATE			
finishing Final Report on design		RECEIVED BY			
analysis.....		DATE			
RES:		D. Lange			
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27 July 1971

Mr. Edson G. Case, Director  
Division of Reactor Standards  
U.S. Atomic Energy Commission  
Washington, D.C. 20545

Re: Contract No. AT(49-5)-2667  
Three Mile Island Nuclear Station -- Unit 1  
Metropolitan-Edison Company and  
Jersey Central Power and Light Company  
AEC Docket No. 50-289

Regulatory

File Cy.

Dear Mr. Case:

Upon the conclusion of our review of the Preliminary  
Safety Analysis Report and Amendments for the Three Mile Island  
Nuclear Station -- Unit 1, Dr. W. J. Hall and I have prepared  
our final report, which is transmitted to you herewith.

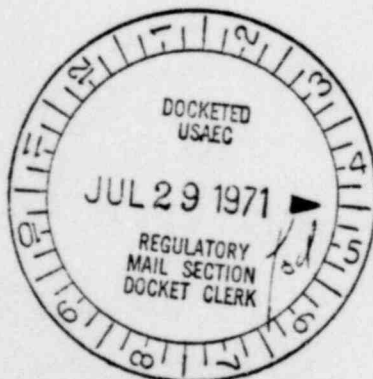
Sincerely yours,

*N. M. Newmark*

N. M. Newmark

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Enclosure

cc: W. J. Hall (2)



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27 July 1971

FINAL SAFETY ANALYSIS REPORT  
FOR  
THREE MILE ISLAND NUCLEAR STATION -- UNIT 1  
METROPOLITAN-EDISON COMPANY AND JERSEY CENTRAL POWER AND LIGHT COMPANY  
AEC Docket No. 50-289  
by  
N. M. Newmark and W. J. Hall

After our review of the FSAR, including Amendments through No. 20, we believe that the design of the Three Mile Island Nuclear Station, Unit 1, can be considered adequate in terms of provision for safe shutdown for a Design Basis Earthquake of 0.12g maximum horizontal ground acceleration, and capable otherwise of withstanding the effects of an Operating Basis Earthquake of half this intensity.

Our review was based on consideration, among other things, of the design criteria and results of analyses presented by the applicant for Reactor Internals, Reactor Buildings, Buried Piping, Other Nuclear Piping and Equipment, and Critical Items of Control and Instrumentation.

The Aircraft Impact Design described by the applicant was also taken into account in our review.

We believe the procedures used and the designs developed are in accord with the state of the art. We conclude that the design incorporates an acceptable range of margins of safety for the hazards considered.

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N. M. Newmark