



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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Frank R. Pomano, Chairman  
Air & Water Pollution Patrol  
61 Forest Avenue  
Ambler, Pennsylvania 19002

OCT 09 1980

Dear Mr. Romano:

Your letter to H. R. Denton, dated August 1, 1980, has been referred to me for response.

NRC recently received two documents relative to the effect of quarry blasting at the Limerick Generating Station. The first document is from J. F. Devine, Acting Assistant Director for Engineering Geology dated July 25, 1980 with an addendum letter dated August 11, 1980. The second document is the report titled, "Comparison of Near Site Quarry Blast Characteristics to the Seismic Design at Limerick Generating Station". This report was generated by the Philadelphia Electric Company (PECO) as a result of an NRC request on December 18, 1979, and was transmitted to NRC on July 29, 1980. I have enclosed copies of these two documents for your information. The PECO report is currently undergoing NRC staff review.

Neither of these two documents address the additional questions which you raised relative to the effect of quarry blasting on "green" concrete and the March 11, 1980 Philadelphia Earthquake.

In considering the potential effect on "green" concrete from the blasting in the nearby quarry, the staff considered two major factors. First, blasting which may occur while the concrete is still in its plastic state, and secondly the effect on the concrete after initial "set". During the plastic state the staff has concluded that the short-term vibration from quarry blasting would have no deleterious effect since all concrete in complex pours such as this require mechanical vibration during the pour to consolidate and obtain proper concrete density. Excessive vibration could cause aggregate separation, but we have no reason at present to believe that such vibration has occurred at the Limerick site. In order to determine if the blasting produced any detrimental effects on Category I structures the staff is planning to investigate the as-built structures. The applicant will be requested to survey the plant's structures with regard to the existence of permanent excessive cracks. When this survey is completed and the cracks, if any, are mapped, the applicant will be required to submit the results. The staff will review the applicant's report and will determine if the effects of blasting may have been detrimental or inconsequential. At that time an appropriate action will be taken by the staff.

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Frank R. Pomano, Chairman

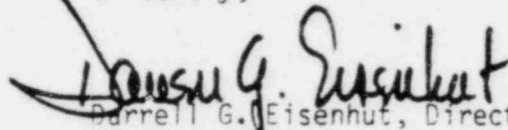
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With regard to the question of the March 1980 Philadelphia earthquake, I have enclosed the staff analysis which was recently completed by our Geosciences Branch.

It is anticipated that the Structural Engineering Branch staff review of PECO's report will generate a need for additional information. You will be provided with any correspondence and also informed of any meetings which may be scheduled as a result of our continuing review.

Sincerely,

  
Darrell G. Eisenhut, Director  
Division of Licensing

Enclosures:

1. Letter to Dr. Robert E. Jackson  
from J. F. Devine dated July 25, 1980, ACRS
2. Letter to Mr. A. Schwencer from  
E. J. Bradley, PECO, dated July 29, 1980
3. Staff analysis - March 1980 Philadelphia  
Earthquake