

Mr. William J. Cahill, Jr.  
Chief Nuclear Officer  
, Power Authority of the State of  
New York  
123 Main Street  
White Plains, NY 10601

October 22, 1996

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION CONCERNING POROUS CONCRETE  
SUB-FOUNDATION

Dear Mr. Cahill:

The NRC has been evaluating the reported erosion of cement from under the containment foundation basemat at Millstone 3. The Millstone Unit 3 containment foundation basemat is supported on rock; however, between the rock surface and the underside of the structural concrete basemat there are several layers of material, one of which is a 9-inch thick porous concrete layer consisting of coarse stone aggregates and high alumina cement. Six-inch diameter porous concrete pipes are installed in this porous concrete layer to collect and drain ground water which may seep down along the periphery of the containment wall. The collected water drains into two sumps inside the Engineered Safety Features Building. Cement slurry has been observed in these sumps. Based on our review of the information provided to us so far, there is no immediate safety concern because the amount of cement estimated to have possibly eroded since the plant was built in 1975 is only a small fraction of the total cement weight of the porous concrete, and because no adverse consequences of the cement erosion are either predicted or have been observed at Millstone 3. With regards to any generic implication of this issue on other containment foundations with similar design, the staff has identified additional plants for which it requires more detailed information, including FitzPatrick.

Enclosed is a request for additional information. Please provide your response within 14 days from receipt of this letter.

Sincerely,

/S/

Karen R. Cotton, Acting Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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PDR ADOCK 05000333  
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Docket No. 50-333

Enclosure: As stated

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script that reads "Karen R. Cotton".

Karen R. Cotton, Acting Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosure: As stated

William J. Cahill, Jr.  
Power Authority of the State  
of New York

James A. FitzPatrick Nuclear  
Power Plant

cc:

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Power Plant  
P.O. Box 41  
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REQUEST FOR ADDITIONAL INFORMATION  
CEMENT EROSION UNDER CONTAINMENT FOUNDATION

Your plant appears to have a porous concrete layer below the containment basemat.

1. Have you found slurry in the drainage from this layer?
2. Has there been any settlement of the containment basemat?
3. Have you noticed any unusual conditions which may be related to the porous concrete sub-foundation layer?
4. Are you monitoring anything related to the drainage from the porous concrete sub-foundation layer(s) below the containment basemat?
5. Is calcium aluminate (high alumina) cement used as a constituent in the porous concrete mix?

Enclosure