

Mr. Ted C. Feigenbaum
Executive Vice President and
Chief Nuclear Officer
Northeast Utilities Service Company
c/o Mr. Terry L. Harpster
Director - Nuclear Licensing Services
P.O. Box 128
Waterford, CT 06385

October 18, 1996

SUBJECT: REQUEST FOR INFORMATION CONCERNING POROUS CONCRETE SUB-FOUNDATION

Dear Mr. Feigenbaum:

The NRC has been evaluating the reported erosion of cement from under the containment foundation basemat of Millstone Unit 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 Unit 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 the Haddam Neck Plant.

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

Sincerely,

Original signed by:

Stephen Dembek, Project Manager
Northeast Utilities Project Directorate
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-213

Enclosure: As stated

cc w/enclosure: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 18, 1996

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T. Feigenbaum
Northeast Utilities Service Company

Haddam Neck Plant

cc:

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Waterford, CT 06385

REQUEST FOR INFORMATION

CEMENT EROSION UNDER CONTAINMENT FOUNDATION

Your plant(s) appear(s) 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