

July 30, 1984
SBN-700
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

References: (a) Construction Permits CPPP-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) Telecon of July 2, 1984, A. L. Legendre (YAEC) to J. Beall
(NRC Region I)

Subject: Interim 10CFR50.55(e) Report; Diesel Generator Exhaust Silencer
Pedestal Cracking

Dear Sir:

On July 2, 1984, we reported a potential 10CFR50.55(e) deficiency to Region I [Reference (b)] regarding cracked concrete pedestals supporting the Diesel Generator Exhaust Silencer Tank.

It has been determined that this item is reportable under 10CFR50.55(e). The following information is being filed pursuant to the interim reporting provision of 10CFR50.55(e)(3).

A. Description of Deficiency

The set of concrete pedestals which support the exhaust silencer tank for Diesel Generator A, cracked during operational testing. The cracking occurred because the pedestal base plate details did not account for the thermal expansion of the exhaust silencer's steel support saddles. The support saddles, which experience temperatures in excess of 200°F, expanded more than the anchor bolt clearances provided at the base plate. Excessive restraining forces developed in the anchor bolts and at the corners of the concrete pedestals where the anchor bolts are located.

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In addition, temperatures in excess of 200°F were experienced by the top portion of the concrete pedestal. These temperatures are greater than the maximum recommended concrete temperatures for sustained operation.

B. Analysis of Safety Implications

If left undetected, the cracked foundation for the exhaust silencer may not be capable of supporting imposed shear loads in the event of a seismic disturbance. Should a seismic event occur of sufficient magnitude to over stress the silencer anchorage, the integrity of the silencer shell could be compromised, thus exceeding the original design criteria for the exhaust silencer. The failure of the exhaust silencer could potentially compromise the performance of the diesel generator units.

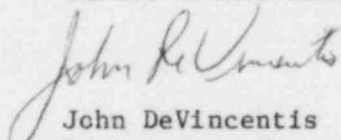
C. Corrective Action

The support system for the exhaust silencers for both diesel generator trains have been redesigned. The original concrete pedestal will be replaced by a steel pedestal. The support saddles will not be insulated. The revised design also includes sufficient bolt clearances to accommodate baseplate saddle temperatures up to 500°F and axial silencer expansion consistent with exhaust temperatures of 1000°F. The steel pedestal will enhance heat dissipation and limit concrete temperatures at the base of the steel pedestal to within recommended limits.

We will notify your office when the above actions are completed.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


John DeVincentis
Engineering Manager

cc: Atomic Safety and Licensing Board Service List

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