



PSEG

Public Service
Electric and Gas
Company

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MAILING ADDRESS / P.O. Box 570, Newark, NJ 07101

August 18, 1982

Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, MD 20014


Dear Mr. Varga:

NUREG 0737, ITEM II.E.1.1
AUXILIARY FEEDWATER SYSTEM EVALUATION
SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

Your letter dated July 20, 1982 identified three items of concern for which additional information was requested. In response to your request, a conference call with Mr. Robert Gramm of the NRC Auxiliary Systems Branch was held on August 17, 1982. We feel that the information supplied during the conference call has satisfied the areas of concern and we have adequately responded to the Auxiliary Feedwater pump endurance test recommendation.

Attached is a summary of our responses to the items listed in your letter. If you should have any additional questions, we will be pleased to discuss them with you.

Very truly yours,


E. A. Liden, Manager
Nuclear Licensing and
Regulation

Attachment

CC Mr. Leif Norrholm
Sr. NRC Resident Inspector - Salem

Mr. William J. Ross
NRC Project Licensing Manager- Salem

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The Energy People

August 18, 1982

SALEM GENERATING STATION
AUXILIARY FEEDWATER PUMP
48-HOUR ENDURANCE TESTS

1. The Public Service Electric & Gas Company Auxiliary Feedwater Pump (AFP) endurance test procedure contained a PRECAUTIONARY limit on bearing temperatures of 170°F. The control room alarm setpoint is 180°F. Vendor recommendations are 185°F - ALARM and 194°F - STOP PUMP.
2. The PSE&G AFP endurance test procedures contained a PRECAUTIONARY vibration limit of 1 mil. This is not, and was not identified in the procedure as a design limit. We use the Hydraulic Institute Standards manual guidelines for both pump and motor vibration. In this manual, vibration of 2 mils. or less are acceptable levels of operation for the AFP's.

The personnel who monitored and recorded pump data were shift operating personnel who routinely perform pump vibrational surveillance testing and had received instructions on the job in the proper use of IRD vibration measurement equipment. While the test personnel were not considered to be "vibration analysis technicians" for data recording purposes, shift supervision and test engineers were available to interpret the data. The discontinuities in vibration readings were not accompanied by higher bearing temperatures and were within acceptable levels. Accordingly, the pumps were allowed to run and were considered acceptable.

3. The motor vibrations, noted as "rough" in the Danak to Berrick memorandum, actually fall predominantly in the "slightly rough" range of the IRD chart. Subsequent operation and surveillance testing of the Unit 1 AFP's have not indicated any cause for concern. The Unit 1 Auxiliary Feedwater pumps and motors have required no bearing maintenance or replacement since the completion of the endurance test. As a point of information, #21 AFP outboard pump bearing experienced a high temperature alarm roughly ten months after the Unit 2 endurance tests; the necessary repairs were made and the pump returned to service.

The Station Operations Review Committee (SORC) reviewed the test package, which included the Danak to Berrick memorandum, and determined that other than continued surveillance, no additional review by our Energy Laboratory was required and that the concern of the memo raised no unreviewed safety questions.