



CONNECTICUT YANKEE ATOMIC POWER COMPANY

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April 23, 1980

Docket No. 50-213

Director of Nuclear Reactor Regulation
Attn: Mr. D. L. Ziemann, Chief
Operating Reactors Branch #2
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

References: (1) D. L. Ziemann letter to D. C. Switzer dated May 26, 1978.
(2) W. G. Counsil letter to D. L. Ziemann dated July 26, 1978.

Gentlemen:

Haddam Neck Plant
Additional Information - Charging System Vibration

In Reference (1), Connecticut Yankee Atomic Power Company (CYAPCO) was requested to provide the NRC Staff with information about the charging pumps used at the Haddam Neck Plant. Reference (2) presented pertinent information regarding the centrifugal charging and positive displacement metering pumps. Further discussions with the Staff indicate that the main concern is with the vibrational characteristics of the metering pump piping which is common to the centrifugal charging pumps. This letter is in response to the Staff's verbal requests for additional information.

The total annual operating time for the metering pump at the Haddam Neck Plant is less than 14 hours. Most of this operation occurs during hydrostatic testing of the primary system at a discharge pressure of from 2000 to 2160 psig. There is no so-called "mixing" mode of operation.

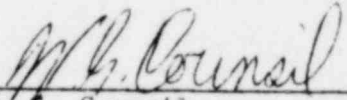
On December 1, 1978, a test was conducted at the Haddam Neck Plant to evaluate operation of the metering pump (reciprocating) and charging pump (centrifugal) under adverse conditions. During the test, the "A" centrifugal charging pump was operated at normal flow (120 gpm) and the metering pump was started and operated at 22 gpm. The volume control tank pressure was then lowered and the pumps and adjacent piping were carefully observed for any signs of excessive vibration or noise which would be indicative of adverse dynamic effects (i.e., flow instability, pressure pulsation, etc.). Test results indicate that both pumps and adjacent piping

operated very smoothly. There were no signs of excessive vibration or noise. It is, therefore, concluded that the operation of the charging and metering pumps is very satisfactory under the most adverse conditions.

We trust that this information is responsive to the Staff's verbal requests.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY



W. G. Council
Vice President