CONNECTICUT YANKEE ATOMIC POWER COMPANY

BERLIN, CONNECTICUT
P. O. BOX 270 HARTFORD, CONNECTICUT 06101

TELEPHONE
203-666-6911

August 7, 1981

Docket No. 50-213
A01789

Director of Nuclear Reactor Regulation
Attn: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: (1) D. M. Crutchfield letter to W. G. Counsil, dated June 12, 1981.

Gentlemen:

Haddam Neck Plant
SEP Topic VII-1.A, Isolation of Reactor Protection System from Non-Safety Systems
SEP Topic VII-2, ESF System Control Logic and Design

Via Reference (1), the Staff requested additional information related to SEP Topics VII-1.A, Isolation of Reactor Protection System from Non-Safety Systems, and VII-2, ESF System Control Logic and Deisgn, for the Haddam Neck Plant. Accordingly, Connecticut Yankee Atomic Power Company (CYAPCO) provides the following responses to the four requests in Reference (1).

1. Enclosed are 6 copies of the following schematics or elementary diagrams for the RTS and ESF systems and their interface with shared control systems.

Reactor Trip System:

16103-32112	Sh. 33
16103-32112	Sh. 34
16103-32112	Sh. 35
16103-32112	Sh. 36
16103-32112	Sh. 37
16103-32112	Sh. 38

Drawings To:
Reg File - 1 Set
BC - 5 Sets
Aperture Card Distribution

A055
S1/6

ESF Systems:

16103-32112	Sh. 32A
16103-32112	Sh. 32B
16103-32001	Sh. 6D
16103-32001	Sh. 6DA
16103-32001	Sh. 6DC
16103-32001	Sh. 6DJ
16103-32001	Sh. 11B
16103-32001	Sh. 11F

2. Enclosed are 6 copies of the following drawings.

16103-26010	P&ID for HPSI and LPSI
16103-26019	Flow Diagram for Core Cooling System
16103-24028	Flow Diagram for Air Cooling & Purging (CAR fans)

3. The isolation devices installed on the Nuclear Power Range channels per Plant Design Change Request #198 dated May 21, 1975 are Bell and Howell isolation amplifiers, Model #18-119-M31.

   These devices were purchased as Q.A. Category 1 items to conform with paragraph 4.7.2 of IEEE 279-1971. Tests were conducted to demonstrate that credible failures, as listed in IEEE 279-1971, at the output of each device did not affect the input signal.

   Since these devices meet the requirements of IEEE 279-1971, they also provide the necessary separation required by GDC 24.

4. There are no fully qualified isolation devices currently in use in the RTS or ESF systems to isolate these systems from non-safety systems. The isolation devices used to isolate the RTS and ESF systems from non-safety systems are:

   (a) resistors - for computer input
   (b) relays - to control input
   (c) recorders - direct series connected to instrument loop

These devices are considered to meet the intent of IEEE 279-1971, which provides a level of assurance that the reliability, redundancy, and independence aspects of the protection system are not compromised and safety is not significantly imparied, as required by GDC 24.

We trust the Staff will find this information responsive to the Reference (1) request.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

W. G. Counsil

W. G. Counsil
Senior Vice President

J. F. Opeka

By: J. F. Opeka
Vice President,
Nuclear Operations