



**CONNECTICUT YANKEE ATOMIC POWER COMPANY**

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April 27, 1980

Docket No. 50-213  
A01203

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

- References:
- (1) W. G. Council letter to D. G. Eisenhut, dated October 31, 1980.
  - (2) W. G. Council letter to Gus C. Lainas, dated February 27, 1981.
  - (3) D. M. Crutchfield letter to W. G. Council, dated March 31, 1981.
  - (4) W. G. Council letter to D. M. Crutchfield, dated May 1, 1980.
  - (5) D. C. Switzer letter to D. L. Ziemann, dated March 21, 1978.

Gentlemen:

Haddam Neck Plant  
Environmental Qualification of Electrical Equipment  
SEP Topic VI-2.D, Mass and Energy Release for Postulated  
Pipe Breaks Inside Containment, and  
SEP Topic VI-3, Containment Pressure and Heat Removal Capability

By Reference (1), Connecticut Yankee Atomic Power Company (CYAPCO) docketed a comprehensive submittal responding to the Commission's requirements regarding environmental qualification, thereby fulfilling the Order for Modification of License imposed on DPR-61.

In Section B.1 of Reference (1), a summary of the analyses performed to ascertain the limiting containment temperature and pressure profiles, considering both the LOCA and MSLB, was provided. The methodology employed was consistent with the requirements of NUREG-0588, as discussed in Reference (2).

In Reference (3), the Staff requested responses to 14 questions regarding the blowdown and reflood portions of the postulated events, and 5 questions regarding the containment response. The information request was transmitted to CYAPCO under the guise of SEP Topics VI-2.D and VI-3.

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In response to the requests of Reference (3), CYAPCO hereby provides Attachment 1, Modeling Report and Parameter List for the Connecticut Yankee Atomic Power Company Haddam Neck Plant. This attachment has been structured to include a general description of the code utilized and relevant plant parameters, and responses to each of the 14 questions have been incorporated into the text of the report. Section 1.1 of Attachment 1 discusses the applications and limitations of the methodology utilized, and the Staff is cautioned not to assume that the attached modeling report can be used without modification to analyze LOCA's.

Attachment 1 contains information which is proprietary to Westinghouse. Accordingly, CYAPCO requests that this attachment be withheld from public disclosure.

In order not to delay this submittal of information requested by the Commission, CYAPCO will comply with the requirements of 10CFR2.790 to provide proprietary and non-proprietary versions together with an affidavit as soon as Westinghouse specifically identifies the proprietary information contained in the report and provides CYAPCO with an affidavit. Proprietary and non-proprietary versions of the report and the required affidavit will be submitted promptly upon receipt of the Westinghouse affidavit. For the interim period, copies of the proprietary report are enclosed for the Staff to initiate its review. Westinghouse has advised us that this procedure has been discussed with Mr. E. Shomaker of the NRC Office of Executive Legal Director and that he concurs.

A copy of this submittal is being sent to Westinghouse requesting them to specifically identify the proprietary information and to supply the required affidavit. Westinghouse has advised that they will be able to return the report and affidavit within a week of their receipt of the report.

Regarding the containment response portion of Reference (3), the following information is provided.

#### General Information

Analyses performed to date have utilized the Con-empt EI/026 computer code for both the main steam line break and loss of coolant events.

#### Question

- (1) Provide a quotable reference for the heat structure data defined in the deck.

#### Response

- (1) A listing of major heat structures at Connecticut Yankee had been transmitted to the Staff in Attachment I to Reference (4).

#### Question

- (2) Define the normal and maximum expected temperature permitted in the containment drywell during normal operations.

Response

- (2) Normal containment environmental conditions were also transmitted in Attachment 1 to Reference (4). These were as follows:
- a) Temperature - 109<sup>o</sup>F (maximum normal)  
(120<sup>o</sup>F used in analyses)
  - b) Pressure - 15.7 to 17.2 psia (normal operating)  
(17.7 psia (technical specification limit) used in analyses)
  - c) Humidity - 0.4 to 0.7 (normal operating range)  
(1.0 used in analyses)

Note that values used in analyses were not previously transmitted.

Question

- (3) Verify that the initiation times, flow rates, and heat removal rates in the deck for the sprays and coolers are currently valid.

Response

- (3) Information regarding initiation times and availability of the containment spray system and fan cooler system were also provided in Attachment 1 to Reference (4). The following information supplements that information:
- a) In addition to one CAR fan being available at 60 seconds, two additional CAR fans are assumed to be manually initiated at 15 minutes. The basis for this assumption is documented in Reference (5).
  - b) Heat removal rates of one containment air recirculation determined by testing are:

<u>Temperature</u>	<u>Heat Removal Rate</u>
183 <sup>o</sup> F	28.6 x 10 <sup>6</sup> BTU/Hr
220 <sup>o</sup> F	41.6 x 10 <sup>6</sup> BTU/Hr
261 <sup>o</sup> F	57.0 x 10 <sup>6</sup> BTU/Hr

Question

- (4) Define the maximum temperatures of any and all ECC water injected into the core or sprayed into the containment.

Response

- (4) No water is assumed to be sprayed in the containment since the containment spray system requires manual initiation. The temperature of ECCS water

injected into the core was previously provided in Reference (4).

Question

- (5) Define the containment spray and fan cooler activation time or activation signal and delay time due to the break and/or loss of outside power. Also, define the number of spray and cooler systems normally available and the number to be assumed considering single failure criteria.

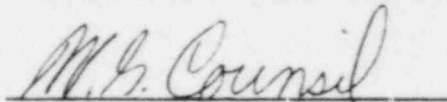
Response

- (5) This information was provided in item (3) of this letter and Attachment 1 to Reference (4).

We trust the above information will be adequate to resolve any remaining questions regarding the adequacy of the calculations performed to define the limiting temperature and pressure profiles within the containment building. As previously stated, the proprietary and non-proprietary versions of Attachment 1 will be the subject of future correspondence.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY



W. G. Council  
Senior Vice President