



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 49 TO FACILITY OPERATING LICENSE NO. DPR-61

CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

APPENDIX J REVIEW

DOCKET NO. 50-213

1.0 BACKGROUND AND DISCUSSION

On January 2, 1975 [1], we requested Connecticut Yankee Atomic Power Company (CYAPCO) (the licensee) to review its containment testing program for the Haddam Neck Plant, and the associated technical specifications, for compliance with the requirements of Appendix J to 10 CFR Part 50.

Appendix J to 10 CFR Part 50 was published on February 14, 1973. Since by this date there were already many operating nuclear plants and a number more in advanced stages of design or construction, the NRC decided to have these plants re-evaluated against the requirements of this new regulation. Therefore, beginning in 1975, requests for review of the extent of compliance with the requirements of Appendix J were made of each licensee. Following the initial responses to those requests, NRC staff positions were developed which would assure that the objectives of the testing requirements of the above cited regulation were satisfied. These staff positions have since been applied in our review of the submittals filed by the licensee for the Haddam Neck Plant. The results of our evaluation are provided below.

2.0 EVALUATION

Our consultant, the Franklin Research Center, (FRC), has reviewed the licensee's submittals [2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13] and prepared the attached Technical Evaluation Report which documents its review and evaluation of containment leakage tests for the Haddam Neck Plant. We have reviewed this evaluation and concur in its bases and findings. On this basis we find the licensee's proposals acceptable.

3.0 SUMMARY

Based on our review of the enclosed Technical Evaluation Report (TER) dealing with the Appendix J review for the Haddam Neck Plant, we conclude that:

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3.1 CYAPCO's proposal to test containment airlocks at the reduced pressure of 10 psig within 72 hours of the first of every series of openings during the interval between 6-month Pa air tests and to conservatively extrapolate the results to 40 psig (Pa) is acceptable. No exemption from the requirements of Appendix J is necessary because of the revision to Section III.D.2, effective October 1980. Special Maintenance Procedure SPL 10.7-20 is an acceptable method for determining the extrapolation correction factor.

3.2 The isolation valves in the following penetrations for which exemption from the Type C testing requirements of Appendix J were proposed do not need exemptions because Appendix J does not require that they be tested:

RHR System (penetrations P-1 and P-2);

\*Main steam and feedwater lines (penetrations P-42 through P-49);

Service water to and from containment recirculation units (penetrations P-51 through P-58);

\*\*Reactor coolant charging (penetration P-8); and

\*\*RCP seal water supply (penetrations P-74 through P-77).

3.3 Exemption from the Type C testing requirements of nitrogen supply valve 3/4-in C-32-557 is not necessary. The licensee has committed to perform this Type C testing in accordance with Appendix J.

3.4 Type C testing with water as a test medium in lieu of air or nitrogen is acceptable only where the hydraulic test is used to demonstrate a water seal at the penetration throughout the post-accident period.

3.5 CYAPCO's proposals for reverse direction testing of certain isolation valves is acceptable with exception of valve VH-V-507, which must be tested in the direction of its safety function. The licensee has committed to modify this penetration to permit this testing.

3.6 The following proposed changes to the Technical Specifications for the Haddam Neck Plant have been found acceptable as related to containment leakage testing (Section 4.4);

Reference 12 (Total leakage from local testing not to exceed 0.6 La); and

Reference 13 (Changes related to airlock testing).

#### 4.0 ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### 5.0 CONCLUSION

We have concluded, based on the considerations discussed in the attached Technical Evaluation Report dated July 31, 1981, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

#### 6.0 ACKNOWLEDGMENT

The following people have contributed to this Safety Evaluation:

J. Pulsipher  
C. Tropf

Attached:  
Technical Evaluation Report  
dated July 31, 1981

Date: May 7, 1982

REFERENCES

1. E. J. Brunner (NRC, I&E Region 1)  
Letter to D. C. Switzer (CYAPCO)  
January 2, 1975
2. D. C. Switzer (CYAPCO)  
Letter to R. A. Purple (ORB-1)  
March 14, 1975
3. R. A. Purple (ORB-1)  
Letter to D. C. Switzer (CYAPO)  
April 11, 1975
4. D. C. Switzer (CYAPCO)  
Letter to R. A. Purple (ORB-1)  
May 28, 1975
5. D. C. Switzer (CYAPCO)  
Letter to R. A. Purple (ORB-1)  
August 20, 1976
6. D. C. Switzer (CYAPCO)  
Letter to A. Schwencer (ORB-1)  
December 27, 1976
7. D. C. Switzer (CYAPCO)  
Letter to A. Schwencer (ORB-1)  
August 8, 1977
8. D. C. Switzer (CYAPCO)  
Letter to A. Schwencer (ORB-1)  
September 19, 1977
9. W. G. Council (CYAPCO)  
Letter to D. L. Ziemann (ORB-2)  
June 12, 1978
10. W. G. Council (CYAPCO)  
Letter to D. L. Ziemann (ORB-2)  
November 13, 1978
11. W. G. Council (CYAPCO)  
Letter to D. L. Ziemann (ORB-2)  
July 24, 1979
12. D. C. Switzer (CYAPCO)  
Letter to A. Schwencer (ORB-1)  
June 27, 1977
13. W. G. Council (CYAPCO)  
Letter to D. L. Ziemann (ORB-2)  
September 21, 1979
14. NRC/CYAPCO Meeting  
December 2, 1976
15. NRC/CYAPCO Meeting  
November 17, 1977