

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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March 3, 1988

Docket Nos. 50-213

50-336

50-423

B12841

Re: Generic Letter 83-28

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Haddam Neck Plant
Millstone Nuclear Power Station, Unit Nos. 2 and 3
Generic Letter 83-28, Items 4.2.3 and 4.2.4 (TAC #60398 and #53920)

In Reference (1) the NRC Staff sought information on life testing (Item 4.2.3) of reactor trip circuit breakers including their trip attachments, on an acceptable sample size; and on periodic replacement (Item 4.2.4) of reactor trip breakers or their components consistent with demonstrated life cycles. References (2), (3), and (4) requested additional information so that the Staff could continue to review these items for the Haddam Neck Plant and Millstone Unit Nos. 2 and 3.

Connecticut Yankee Atomic Power Company (CYAPCO) and Northeast Nuclear Energy Company (NNECO) had hoped to respond to Staff concerns as part of the Westinghouse Owners Group (for the Haddam Neck Plant and Millstone Unit No. 3) and the Combustion Engineering Owners Group (for Millstone Unit No. 2). References (5) and (6) requested extensions for required responses to Staff concerns until the respective owners groups could meet and agree on a generic response to the reactor trip breaker issues. In order to be more timely in addressing the Staff's concerns, it is prudent for CYAPCO and NNECO to respond at this time on behalf of the Haddam Neck Plant and Millstone Unit Nos. 2 and 3, respectively.

CYAPCO and NNECO maintain that plant procedures currently in place constitute an acceptable ongoing life testing program for the reactor trip switchgear, breakers and the components thereof. While defined component lifetimes and replacement intervals could be an outgrowth of such an ongoing life testing program, the program itself is structured such that functional capability and reliability are ensured without a requirement for specific equipment or component lifetimes or replacement intervals.

The reactor trip switchgear at all three plants is located in a mild environment as defined in both References (7) and (8). These references make clear distinctions on the differences in qualification methods applied to equipment located in a mild environment versus those located in a harsh environment. For example, Reference (7) clearly indicates that the subject rule is not

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applicable to mild environment safety related equipment. Similarly, Section four (4) of Reference (8) indicates that, "For equipment located in mild environments and which has no significant aging mechanisms, a qualified life is not required." It is the collective engineering judgement of both CYAPCO and NNECO that the applications within which the reactor trip breakers function do not provide a significant aging mechanism, either thermally or mechanically. Hence, we are aware of no requirement for life cycle (qualified life) testing of this equipment, nor do we see a benefit thereto.

In the absence of defined component lifetimes and replacement intervals, credit is taken for an ongoing life testing program. Ongoing life testing is predicated upon accepted industry concepts and standards such as Section 6.9(4), Extension of Qualified Life, of Reference (8) and Section 4 of Reference (9) wherein it is indicated that, "Periodic testing of Class 1E safety systems contributes, by means of the detection of failures, to the realization of desired system operational availability and calls attention to performance that is not within prescribed limits." Each of the three plants considered herein has detailed maintenance procedures applied periodically to the reactor trip breakers and switchgear. These procedures have been previously discussed and/or documented in communications with the Staff regarding the resolution of Items 4.2.1 and 4.2.2 of Reference (1). The procedures are consistent with each of the three elements of Reference (10), i.e., surveillance, maintenance, and testing, for demonstrating and maintaining the qualification of electrical equipment in mild environments.

While a life cycle limit of 1250 operations has been defined and included in the procedures for the undervoltage trip devices of the Haddam Neck Plant and Millstone Unit No. 3 (Westinghouse WCAP's 10852 and 10835, respectively), this limit is of questionable value since the figure is conservatively low, is a very large number relative to the expected number of breaker operations between refuelings (and may be in excess of the figure expected for a forty (40) year plant life) and any wear, misadjustment or degradation would also be expected to be revealed by the conscientious application of the applicable surveillances, maintenance and testing procedures.

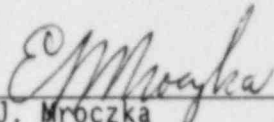
In conclusion, given a number of factors, including but not limited to, the previous satisfactory operating/maintenance experience of reactor trip breakers (RTBs) at these plants, good detailed procedures (including parameter trending of significant functions), the robustness of circuit breaker design as embodied in industry standards such as Reference (11), minimal to normal applications stresses (voltage, mechanical, thermal), limited organic materials, and review of vendor documentation, CYAPCO and NNECO do not believe life cycle testing is required or appropriate. Consequently, it is inappropriate to specify specific component or equipment lifetimes or replacement intervals. Replacement, refurbishing or adjustment of the RTBs or their components will be performed, as necessary to maintain their reliable functional capability, utilizing the judgement of competent engineering and/or maintenance personnel, consistent with the requirements contained within the written procedures.

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CYAPCO and NNECO believe the above information is responsive to Staff concerns in this area. Please contact us if you have any further questions.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY



E. J. Mroczka
Senior Vice President

cc: W. T. Russell, Region I Administrator
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 2
R. L. Ferguson, NRC Project Manager, Millstone Unit No. 3
A. B. Wang, NRC Project Manager, Haddam Neck Plant
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3
J. T. Shedlosky, Resident Inspector, Haddam Neck Plant

REFERENCES

1. D. G. Eisenhower letter to All Licensees of Operating Reactors, Applicants for Operating Licenses, and Holders of Construction Permits, dated July 8, 1983 (Generic Letter 83-28).
2. Francis M. Akstulewicz letter dated August 24, 1987 to Edward J. Mroczka, "Request for Information Concerning Item 4.2 of Generic Letter 83-28."
3. David H. Jaffe letter dated September 4, 1987 to Edward J. Mroczka, "Millstone Nuclear Power Station, Unit No. 2."
4. Robert L. Ferguson letter dated September 3, 1987 to Edward J. Mroczka. "Generic Letter 83-28 Salem ATWS Item 4.2."
5. E. J. Mroczka letter to U.S. Nuclear Regulatory Commission "Generic Letter 83-28, Item 4.2" dated October 8, 1987.
6. E. J. Mroczka letter to U.S. Nuclear Regulatory Commission "Generic Letter 83-28, Items 4.2.3 and 4.2.4" dated December 11, 1987.
7. 10CFR50.49(c)
8. IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations (IEEE Std. 323-1983).
9. IEEE Standard Criteria for the Periodic Testing of Nuclear Power Generating Station Safety Systems (IEEE Std. 338-1977).
10. Darrell G. Eisenhower letter to All Power Reactor Licenses, Applicants for an Operating License, NSSS Vendors and Reactor Vendors, dated April 20, 1982 (Generic Letter 82-09).
11. American National Standard Preferred Ratings, Related Requirements, and Applications Recommendations for Low-Voltage Power Circuit Breakers and AC Power Circuit Protectors (ANSI 37.16-1980).