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

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Docket Nos. 50-213
50-245
50-336
A01668

Mr. Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

References: (1) D. G. Eisenhut letter to All Operating Plants and Applicants for Operating Licensees and Holders of Construction Permits, dated October 31, 1980, forwarding NUREG-0737.
(2) W. G. Counsil letter to D. G. Eisenhut, dated December 15, 1980.
(3) W. G. Counsil letter to D. G. Eisenhut, dated December 31, 1980.
(4) D. M. Crutchfield letter to W. G. Counsil, dated April 17, 1980.
(5) W. G. Counsil letter to H. R. Denton, dated December 31, 1979.

Gentlemen:

Haddam Neck Plant
Millstone Nuclear Power Station, Unit Nos. 1 and 2
TMI Action Plan Item II.B.3; Post Accident Sampling Capability

Item II.B.3 of Reference (1) requires that licensees establish an onsite radiological and chemical analysis capability to provide, within a three hour time frame, quantification of certain radionuclides and other indications of reactor coolant and containment atmosphere chemical composition, under all design basis accident conditions. In References (2) and (3), Connecticut Yankee Atomic Power Company (CYAPCO), on behalf of the Haddam Neck Plant, and Northeast Nuclear Energy Company (NNECO),

on behalf of Millstone Unit Nos. 1 and 2, informed the Staff that should the sample analysis laboratory at the site which experienced the accident become uninhabitable, the sample could still be analyzed within the required time frame by transporting it to the laboratory at the site which did not experience the accident. This deviation was justified by the relative proximity of the Haddam Neck and Millstone sites. It should be noted that by requesting this deviation, CYAPCO and NNECO had not determined that the onsite laboratories would become uninhabitable during the design basis accident. CYAPCO and NNECO had not performed shielding calculations to demonstrate that the laboratories would remain habitable; however, since the laboratories at both sites are located in buildings which do not circulate primary coolant, it was determined through qualitative engineering judgment that the dose rates and airborne contamination levels would be acceptable. The use of the alternate site laboratory was retained as backup capability.

Via Reference (4), CYAPCO and NNECO were advised that this deviation was unacceptable to the Staff. The basis for this determination was that certain hypothetical factors could prevent timely transport of the sample to the alternate site. Subsequent to the receipt of Reference (4), CYAPCO and NNECO performed the necessary shielding calculations to demonstrate that the onsite laboratories would remain habitable under all accident conditions.

Calculations were performed using similar methodologies to those presented in Section 2.1.6.b of Reference (5). Source terms used were those required by NUREG-0737. The sources considered included all piping which could contain primary coolant, direct shine from the primary containment, and airborne activity in the Millstone Unit No. 1 reactor buildng. The analytical code used was the QAD-P5F point kernel shielding code. Dose rates were calculated for a time of 2 hours after shutdown and resulted in the following dose rates;

Haddam Neck Chemistry Lab - 226 mr/hr
Haddam Neck GeLi detector in Turbine Building - 0.08 mr/hr
Millstone Station Chemistry Lab - 0.29 mr/hr

CYAPCO and NNECO have concluded that the dose rates are acceptable for personnel occupancy since all analyses including boron, hydrogen, and a gamma spectrum can be performed in less than one hour. This would result in doses of less than 10% of the quarterly limit of 3000 mrem and would be well within the guidelines of GDC-19 as required by NUREG-0737. The dose rates in the Haddam Neck chemistry lab would be unacceptable as background for the GeLi spectrometer, however, an additional GeLi system used by the Chemistry department at the Haddam Neck Plant is located in the turbine building. This location is shielded from the primary systems by the control room walls and, as demonstrated above, the dose rates are sufficiently low. This system is used for routine analyses and therefore is maintained operable.

The dose rates along access routes to the analysis locations have been qualitatively investigated and determined to be well within the required limits of GDC-19. Additionally, the Health Physics offices at both sites either presently have or will have GeLi systems independent of and at different locations from the Chemistry department's systems. By 1986, the Millstone Unit No. 3 chemistry laboratory will be operational in a separate building complex from the Millstone Unit Nos. 1 and 2 laboratory. Hence, sufficient backup analysis capabilities will exist.

CYAPCO and NNECO have determined that onsite analysis capability exists at each site and thus this NUREG-0737 requirement is fully met.

Reference (4) also reiterated the schedular requirement for implementation of this Action Plan item as January 1, 1982. CYAPCO and NNECO reiterate their intention to comply with this schedule, but advise that full compliance may be precluded for the following reasons. All hardware required for full implementation is scheduled to be available by August, 1981, except for the equipment required to provide chloride analysis capability. Additional engineering and design efforts are required to finalize this segment of the system design.

The current schedule for refueling outages for the Haddam Neck Plant and Millstone Unit No. 2 are such that, assuming no further equipment procurement and delivery problems are encountered, implementation by January 1, 1982 or before startup from the refueling outages is achievable. Regarding Millstone Unit No. 1, the absence of a scheduled outage between the time of availability of the necessary equipment and January 1, 1982 may preclude implementation by that date. The limited accessibility to certain areas of the plant during power operation as well as the difficulties encountered in installing the system during power operation may contribute to delays beyond the January 1, 1982 date. Further updates will be provided as appropriate.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

W. G. Counsil
Senior Vice President