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

APR 17 1981

Docket Nos. 50-213
50-245 ✓
and 50-336
LS05-81-04-016



Mr. W. G. Council
Nuclear Engineering and Operations
Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, Connecticut 06101

Dear Mr. Council:

SUBJECT: POST-ACCIDENT SAMPLING CAPABILITY (NUREG-0737, Item
II.B.3) FOR HADDAM NECK PLANT AND MILLSTONE UNITS
1 AND 2

We have reviewed those parts of your letters of December 15 and 31, 1980, which concern proposed deviations from several of the requirements of NUREG-0737, Item II.B.3, Post-Accident Sampling for Haddam Neck and Millstone Units 1 and 2. We concur in your request to eliminate the charcoal and HEPA filters from the reactor coolant sample sink exhaust ventilation system. We do not find acceptable your request for a delay in implementation of NUREG-0737 beyond January 1, 1982, nor do we agree with your request to provide post-accident radiological and chemical analysis at other nuclear plant laboratories within your grid. Our response is contained in the enclosure to this letter. If you have any questions, please contact us.

Sincerely,

Dennis M. Crutchfield
Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

Mr. W. G. Council

cc

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RESPONSE BY OFFICE OF NUCLEAR REACTOR REGULATION TO DEVIATION REQUESTS
RELATED TO POST ACCIDENT SAMPLING (NUREG-0737, II.B.3) FOR HADDAM NECK
AND MILLSTONE UNITS NO. 1 AND 2 NUCLEAR GENERATING PLANTS

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NOS. 50-213
50-245
50-336

Background

By letters dated December 15 and 31, 1980, the licensee requested deviations from some of the post accident sampling requirements and clarifications of NUREG-0737, II.B.3. On March 17 and 18, 1981 the licensee verbally provided additional information associated with the requested deviations.

Staff Response

1. II.B.3 clarification No. 2, Requiring Onsite Radiological and Chemical Analysis Capability - The licensee proposes as an alternative to qualifying the onsite laboratory for radiological and chemical analysis during and following accident conditions, that he be permitted to take credit for use of radiological and chemical analysis capabilities at alternate commercial nuclear power plant facilities within his grid. Specifically, if an accident condition causes loss of the Haddam Neck onsite analytical laboratory, samples would be transported to and analyzed, within the required three hours, at the Millstone Units No. 1 and 2 site which is within a 40-minute driving distance. Conversely, if the Millstone Units Nos. 1 and 2 laboratory is unavailable due to accident conditions, the samples would be transported to Haddam Neck for analysis, within the three hour period.

From our conversations with the licensee, the licensee does not intend to install an inline monitoring capability at either plant site, nor upgrade the analytical laboratories shielding to ensure their availability during an accident condition.

By this procedure, the licensee can save the cost of analysis and the cost of any subsequent upgrading of shielding which would be required.

The requirements of NUREG-0737, II.B.3, clarification 2 are that "the licensee shall establish an onsite radiological and chemical analysis capability to provide, within 3 hours, quantification of";

- a. Certain radionuclides in reactor coolant
- b. Hydrogen levels in containment atmosphere
- c. Dissolved gases and boron concentration of liquids
- d. Alternatively, have inline monitoring capabilities to perform all or part of the above analyses.

Further, clarification No. 8 states: "If inline monitoring is used for any sampling and analytical capability specified herein, the licensee shall provide backup sampling through grab samples, and shall demonstrate the capability of analyzing the samples. Established planning for analysis at offsite facilities is acceptable."

The staff intent of clarifications Nos. 2 and 8 is to ensure that an onsite capability to analyze and mitigate the extent of an accident condition is maintained at each commercial nuclear generating station. We believe that numerous factors could affect the ability of a plant to transport samples offsite in the short term (i.e., excessive contamination, inclement conditions, laws covering transport of radioactive materials, etc.). Therefore, reliance on an offsite laboratory is not acceptable to us as a first line analysis capability for mitigating the consequences of an accident.

Because it is our aim to minimize man rem exposure, we do allow credit for inline monitors. As indicated in clarification No. 8, for any analysis being performed by an inline monitor, it is acceptable to rely on backup offsite analysis of grab samples.

Because the licensee does not intend to install an inline monitoring capability at either plant site, taking credit for the analytical capabilities at the non-affected site does not meet the intent of clarification Nos. 2 and 8, and is therefore, not acceptable.

2. II.B.3 clarification 11(b), Requiring Charcoal Adsorbers and HEPA Filters Be Installed in the Reactor Coolant System Sample Sink, Exhaust Ventilation System - The licensee proposes not to install charcoal adsorbers and HEPA filters because he will not be flushing reactor coolant samples directly to the sample sink. Thus the sample sink will not become a major potential source for airborne radioactivity. To obtain a representative sample during the accident condition, the licensee will purge the sample lines to an enclosed container. For Millstone Unit No. 1, the purge water is returned to the primary containment torus. Haddam Neck and Millstone Unit No. 2 will return sampling water to the volume control tank.

The staff's intent for clarification 11(b) is to minimize discharges of radioactivity during the sample flushing procedure, when the purge water is drained to an open sink. By purging to an enclosed system which has effluent treatment and radiation monitoring provisions during the sampling process, the licensee is minimizing discharges of radioactivity during sampling. This method meets the intent of clarification 11(b) and therefore, is acceptable.

3. II.B.3, Implementation Schedule, Requiring Implementation of NUREG-0737, II.B.3 Requirements by January 1, 1982 - The licensees intend to comply with II.B.3 requirements for implementation by January 1, 1982, but are informing us of a potential for delays in equipment delivery dates which may preclude timely compliance. The licensee proposes that implementation schedules be revised to state, January 1, 1982 or the next refueling outage.

In our opinion, sufficient lead time has been provided to meet the January 1, 1982 implementation schedule of NUREG-0737; therefore extension of the schedule is not acceptable at this time.