

Docket



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

July 10, 1981



Docket No. 50-29
LS05-81-07-017

Mr. James A. Kay
Senior Engineer-Licensing
Yankee Atomic Electric Company
1671 Worcester Road
Framingham, Massachusetts 01701

Dear Mr. Kay:

We have reviewed your letter of December 15, 1980, responding to USNRC Letter, D. Eisenhut to All Licensees of Operating Plants, dated October 31, 1980, and find that your response to Item II.F.1(2) is not acceptable. The response states that action on design, procurement, and installation of plant equipment for monitoring of radioiodine and particulate effluents will be dependent on the results of a plant shielding review which has been deferred to the systematic evaluation program (SEP).

Your response appears to be the result of a misinterpretation of requirements for Item II.F.1(2), which appeared in Table II.F.1-2 of NUREG-0737. The referenced table specifies a design basis shielding envelope which is specific to the design of an effluent sampler. This sampler should be designed with the capability of collecting a sample of plant effluents having a radioactive concentration and total collection time equivalent to the parameters of the specified design envelope. Plant operators should then be able to retrieve the sample, transport it to a counting/analytical facility, and to analyze the sample. The design of the sampler, any necessary handling tools, transporting shields, and the analytical facility should be such that design radiation exposures to individuals should not exceed 5 rem to the whole body or 75 rem to the extremities.

We are aware of the staff's and your concerns over the results of the preliminary shielding studies of worst case accidents done under Item II.B.2 of NUREG-0737, the radiation from which could limit access to the sampler while maintaining projected personnel doses at less than 5 rem to the whole body. However, we are also concerned with other accident scenarios which are postulated to result in environmental releases of particulates and iodines with lower levels of radiation attributable to noble gas releases. Therefore, it is our position that you should proceed with design and procurement of equipment to meet the requirements of Item II.F.1(2) of NUREG-0737 on a schedule to meet the original implementation date of January 1, 1982.

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For the special case of unshielded containments such as Yankee Rowe, design dose calculations for sampling, retrieval, and handling of particulate and iodine effluent samples should assume an extracamera or ambient radiation level of 25 R/hr of 0.5 MeV gamma photons at the sampling location in addition to the radiation from the radioactivity integrated on the sample(s) for the purpose of assessing the design dose limits of 5 rem to the whole body and 75 rem to the extremities.

Sincerely,

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

cc: See next page

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Mr. James A. Kay

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July 10, 1981

cc

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