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

November 4, 1979

Docket No. 50-309

Emil G. Garrett, Lt./Col. USA Ret.
P. O. Box 91
Stockton, Springs, Maine 04981

Dear Colonel Garrett:

This letter is in response to your October 31, 1979 letter requesting information regarding Maine Yankee's spent fuel pool. In light of your question #7 regarding public participation in the proposed issuance of an Amendment, you were contacted by telephone on November 16, 1979, by the NRC Project Manager assigned to Maine Yankee to permit timely Notification of the applicable Federal Register Notice and an awareness of the November 23, 1979 deadline for filing a request for a hearing as stated in that notice.

Verbal responses to the nine questions specified in your October 31, 1979 submittal were given during the telephone communication. The enclosure summarizes the responses.

We trust this information is responsive to your request.

Sincerely,

William P. Gammill, Acting Assistant
Director for Operating Reactor
Projects
Division of Operating Reactors

Enclosure: Response to
Maine Yankee's Spent
Fuel Pool

cc: Mr. Robert H. Groce
Licensing Engineer
Yankee Atomic Electric Company
20 Turnpike Road
Westboro, Massachusetts 01581

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RESPONSE TO QUESTIONS CONCERNING
MAINE YANKEE'S SPENT FUEL POOL

1. License Amendment No. 11, issued October 31, 1975, authorized the replacement of the original storage racks with racks that increased the maximum allowable storage capacity from 318 assemblies to 953 spent fuel assemblies.
2. Yes, the lack of adequate away-from-plant storage or reprocessing will probably not be resolved in the early 1980s. Currently, spent fuel is not being reprocessed on a commercial basis in the United States. With the NRC decision to terminate the generic study on plutonium recycle use in mixed oxide fuel (GESMO) in December 1977, [42 FR 65334] in deference to the President's non-proliferation policy, commercial reprocessing has been indefinitely deferred in the United States.

Nuclear Waste Management is an area which is receiving attention at many levels of government. Additional sources of information include:

- a. Report to the President by the Interagency Review Group on Nuclear Waste Management, Report TID-29442, March 1979. Available from the National Technical Information Service (NTIS), Springfield, Virginia 22161.
 - b. Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuel, NUREG-0575, Vol. 1, Executive Summary, August 1979. Available from NTIS.
 - c. Regulation of Federal Radioactive Waste Activities, summary of report to Congress on Extending the Nuclear Regulatory Commission's Licensing or Regulatory Authority to Federal Radioactive Waste Storage and Disposal Activities, NUREG-0527 Summary, September 1979. Available from NTIS.
3. There will be no "generic environmental impact statement" required since the proposal will not authorize a significant change in the types or significant increase in the amounts of effluents nor a significant increase in the potential for accidental releases. A negative declaration will be issued as part of the licensing amendment. An environmental impact appraisal will be prepared in support of the negative declaration. (Refer to 10 CFR 51)

Please refer to reference 2.b, page 3-4 for a discussion of compact fuel pin storage. The disassembly procedure is mentioned as a possible alternative but at the time of issuance of the report, the concept had not yet been approved.

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4. The NRC requires and Maine Yankee's submittal of November 22, 1978, considered the alternatives that could alleviate the current need for additional spent fuel storage capacity. Consideration was given to availability, environmental impact, cost and benefits. Options considered include; shipment to a reprocessing plant, shipment to an Independent Spent Fuel Storage Facility, shipment to another reactor site, increase the size of the existing Maine Yankee Spent Fuel Pool, replace the existing spent fuel racks with even more tightly spaced racks, construction of an additional on-site storage pool, and shutdown of the reactor.
5. In order to accommodate Maine Yankee's current schedule, approval of the compaction scheme was requested by early January 1980. The proposed storage scheme is currently under NRC review. If the review is favorable and approval is granted in January, this would allow the utility to proceed with the compaction scheme prior to the discharge of fuel during the next scheduled refueling outage in April 1980. Accomplishing this procedure prior to fuel discharge would be in accordance with the philosophy of limiting radiation exposure as low as reasonably achievable since freshly discharged fuel near the working area would increase the probability of occupational radiation exposure.
6. At this time, the Commission has not received formal requests from other utilities to utilize the compaction concept as outlined by Maine Yankee.
7. The request is being reviewed by the Commission's technical staff in the same manner as any other licensing action. Due to the high public interest in such actions as spent fuel pool modifications, a notice of the proposed issuance of amendment to Maine Yankee's Operating license was published in the Federal Register in late October 1979. The Federal Register Notice outlined the actions the public may take to participate in the actions. As specified in the Federal Register Notice, a Petition for Leave to Intervene has been filed on November 23, 1979, by the non-profit corporation, Sensible Maine Power. November 23, is the closing date for filing petitions to intervene in this action.
8. Please refer to our August 24, 1979 response to your letter of July 11, 1979, specifically response 1. At the current time, Maine Yankee is authorized to store a maximum of 953 spent fuel assemblies. There is approximately 1/2 ton of heavy metal per spent fuel assembly for a total of 476.5 tons. Maine Yankee may request authorization to increase the total spent fuel inventory at the site in the future. The Commission will review any spent fuel inventory request in accordance with criteria in effect at the time of the submittal prior to authorizing an increase in spent fuel inventory.

The information regarding radioactivity inventory contained in our August 24, 1979 response is determined sufficient to satisfy your concerns at this time, (as per your agreement during the discussion of November 16, 1979).

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9. The review of the proposed amendment on spent fuel pool storage will include an evaluation of related issues such as criticality considerations, spent fuel cooling, fuel handling, structural and mechanical design and materials considerations, occupational radiation exposure and radioactive waste treatment. Unresolved issues that do not have an impact on the spent fuel modified storage proposal are not included as a part of this amendment review. However, the asymmetric LOCA loads review you mentioned is being completed as an independent action. The status is described in the NRC Meeting Summary dated November 2, 1979.

Copies of the Maine Yankee Atomic Power Company's submittals and Commission correspondence is available for your review at the Wiscasset Public Library Association, High Street, Wiscasset, Maine.

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EMIL G. GARRETT

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Stockton Springs, Maine 04981

Tel. (207) 567-3300

31 October 1979

U.S. Nuclear Regulatory Commission
Brian K. Grimes
Assistant Director for Engineering and Projects
Washington, D.C. 20555

Dear Mr. Grimes:

By letter dated 18 September 1979, Maine Yankee Atomic Power Company has requested NRC approval for Modified Spent Fuel Bin Storage at Maine Yankee.

I am very interested in this issue and would appreciate it very much if you would provide me the following information:

1. Did License Amendment KB.11, issued Oct. 31, 1975, establish a limit to the amount of spent fuel that could be stored in the Maine Yankee spent fuel pool?
2. The request lists the following statement as a reason for the requested change - " We now believe that neither reprocessing nor waste disposal at a repository or storage at a government facility can be relied upon to correct a lack of storage space during the 1980's." Is this a valid statement?
3. Since the storage concept is new - will the NRC initiate a requirement for a generic environmental impact statement?
4. Will the NRC require MYAPC to consider other options such as transfer of spent fuel to other reactor sites or construction of a new spent fuel pool at the Maine Yankee site?
5. Since refueling discharge capability will not be lost until 1987 - what possible basis is there for the request that NRC approval be granted not later than December 3, 1979?
6. Has the NRC received or do they expect to receive similar requests from other nuclear stations?
7. What is the administrative procedure that the NRC will use in considering the MYAPC request? Will there be a public hearing or any other opportunity for public input?
8. Should the request be approved - how many metric tons of heavy metal could be stored at Maine Yankee by 1996 and what would be the radioactive inventory in curies?

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9. Will the NRC consideration of the request include reasonable evaluation of other issues that might impact on spent fuel storage? Such as the unresolved issue of asymmetric loss of coolant accident loads?

I would appreciate it if you would place my name on the distribution list for correspondence and documents relating to this issue.

Yours truly,

E. A. Barrett

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