

January 19, 2005

Mr. Michael J. Meisner, Chief Nuclear Officer  
Maine Yankee Atomic Power Company  
321 Old Ferry Road  
Wiscasset, Maine 04578-4922

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING FINAL  
STATUS SURVEY (FSS) SUPPLEMENT NO. 2

On September 15, 2004, Maine Yankee Atomic Power Company (MY) submitted Final Status Survey (FSS) Supplement No. 2, for U.S. Nuclear Regulatory Commission (NRC) review and approval. NRC transmitted a Request for Additional Information (RAI) to MY regarding Supplement 2 on November 30, 2004. MY responded to the RAI on December 23, 2004. This letter responds to MY's December 23, 2004, letter and transmits a second RAI. FSS Supplement No. 2 includes 14 survey units (FA-0600) from the Primary Auxiliary Building.

The attachment provides the staff's comments requiring resolution before the U.S. Nuclear Regulatory Commission (NRC) approval of FSS Supplement No. 2. NRC's request for additional information is the result of: (1) missing or insufficient technical information; or (2) missing or insufficient basis for technical conclusions. Maine Yankee is requested to provide the information identified in the attachment. A schedule for Maine Yankee's resubmittal of the survey information, and NRC subsequent review, will be established during an upcoming biweekly teleconference.

Questions regarding this letter should be directed to John Buckley at 301-415-6607.

Sincerely,

**/RA/**

Daniel M. Gillen, Deputy Director  
Decommissioning Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 50-309  
License No.: DPR-36

Attachment: As stated

cc: See next page

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## Reply to Maine Yankee Supplement 2 RAI Response

1. The information provided by Maine Yankee adequately addresses NRC's RAI No. 1.
2. RAI No. 2 requested documentation demonstrating compliance with the 30,000 cpm gamma criterion for Survey Units 1, 2, 6, 8, 10, 12, and 14. In addition, the staff requested that Maine Yankee clarify the placement of shielding and relationship to the measurements reported. Based on our review of the information provided by Maine Yankee in the response to the RAI, the staff finds that the RAI response for Survey Units 1, 6, 10, and 12 is incomplete and unresponsive to the information request. The staff's response is detailed below:

- PAB - SU 1 11/19/2003 Area C437: The response states, "The elevated readings noted in the remediation survey for PAB SU-1 grid number C437 were due to an elevated area on the bottom of the penetration which was only accessible from SU-11 at the time. The initial survey was performed on 11/19/03 and it was noted on the survey log that this penetration would be remediated as part of SU-11. This penetration was remediated and surveyed with a reading of 24,900 cpm as part of Grid C-016 on 12/18/03."

Please clarify which survey unit contains Area C437, and provide the gamma survey that clearly identifies that the penetration gamma measurement for Grid C437 meets the 30,000cpm criteria.

- PAB - SU 1 11/13/2003 Areas C039, C086, C087: Maine Yankee's reply says that the elevated readings in Grids C039, C086, C087 were due to the location of the grids with respect to the Fuel Building tunnel area, which at the time was posted as a high radiation area (HRA). Further, attempts to shield the area affecting the high readings in Grids C039, C086 and C087 were unsuccessful in reducing background levels below 30,000 cpm with the SPA-3 but did allow Maine Yankee to perform beta measurements with the 43-68 probe.

The staff does not have questions regarding the beta measurements performed in Grids C039, C086, C087. The staff is interested in verifying Maine Yankee's statement on page 8 of "Release of Non-ISFSI Site Land - FSS Final Report No. 2," that "All basement surfaces were remediated to the 30,000 cpm gross gamma activity criterion value to detect and remove contamination at depth ..." Please clarify if gamma surveys were performed in these grids after the Fuel Building tunnel walls were removed. If gamma surveys were performed, please provide gamma surveys that clearly identify that gamma measurements for Grids C039, C086, C087 meet the 30K cpm criteria.

- PAB - SU 2 01/06/2004 and 01/08/04 Area C016, C052, C072, C088, C097 C075: Maine Yankee clarified that Grids C072, C075, C088, and C097 met the criteria following additional remediation and the method for shielding of the radiation interfering with measurements of Grids C016 and C052 is adequate. The information provided by Maine Yankee adequately addresses this RAI.

Attachment

- PAB - SU 6 02/13/04 Areas C334, C350, C351, C356, C357: The Maine Yankee response only partially addresses the issues in the RAI. Only measurements for Grids C334 and C351 are correlated to specific samples taken in the survey unit. The remaining grids; C350, C356 and C357 are not correlated to specific sample data provided. Please provide documentation correlating these grids with specific samples.

In addition, in FA0600-06, Table 1, the DCGL is 18,000 dpm/100 cm<sup>2</sup>. Please provide the basis for the 37 pCi/g "volumetric equivalent to the DCGL."

- PAB - SU 10 01/16/04 Areas C029, C064, C213: Maine Yankee's response indicates that the January 16, 2004, surveys for Areas C029, C064, and C213 did not meet the 30K cpm criteria due to the proximity of the Fuel Building tunnel area and the inability to effectively shield the areas from the HRA. During discussions with Maine Yankee on January 19, 2005, Maine Yankee stated that there are no gamma survey records documenting that Areas C029 and C064 meet the 30K cpm criteria. Maine Yankee also stated that Area C213 was located on an upper wall that was removed with Fuel Building tunnel demolition. Please provide historical survey data to demonstrate that contamination is not present at depth.
- PAB - SU 12: The staff requested documentation that demonstrates compliance with the 30K cpm gamma criteria for Survey Unit 12. Maine Yankee's response is unacceptable because the data shows three samples (Grids C046, C046/C047, and C021/C022) that exceed the 37 pCi/g volumetric DCGL for Cs-137. It is also noted that Grid C042 may exceed the DCGL when the unity rule is applied.

As requested for PAB - SU 6, please provide the basis for converting the surface DCGL to a DCGL volumetric equivalent activity. Please clarify which samples are from bedrock surfaces and which samples are from concrete foundations. Since the samples referenced are taken on bedrock or concrete foundations, provide the basis for considering these samples to be near-surface activity. In addition, please describe how these sample activities, including those exceeding the volumetric equivalent DCGL, are accounted for in determining the annual dose, since the grids are not listed in Table 3-1, "FA0600-12 Investigation Table."

3. Maine Yankee's response is incomplete. In the FSS-RR Reports for Survey Units 5 and 12, Maine Yankee concludes that the areas meet the release criteria based on site historical measurements. NRC RAI No. 3, requests that remediation or characterization surveys of the missing areas in Survey Units 5 and 12 be provided. Instead of providing the surveys as requested, Maine Yankee provided an unacceptable technical justification (compares beta-gamma detectors for gamma measurements of adjacent areas), and an interpretation of MARSSIM to mitigate the requirements in LTP Section 5.4.1.

Maine Yankee has not yet provided the requested beta scan survey data for the missing area in Survey Unit 5. However, during the week of October 24 - 28, 2004, the staff was able to verify that a gamma survey was performed for the area to detect contamination at-depth, and that this survey demonstrates that the 30K cpm criteria was met. Based on this gamma survey and the loose surface contamination information provided in the FSS-RR, the staff concurs that the missing surface beta scan area is likely at, or below, the DCGL. Although beta scan survey

data has not been provided, the staff is closing its request for additional information on Survey Unit 5.

During the site visits of November 16-17, 2004, and December 7-8, 2004, the staff specifically requested information and surveys that would enable the staff to facilitate closure of this RAI. No survey data was provided for the missing area in Survey Unit 12. Please provide copies of Survey Unit 12 surveys dated April 7, 2003, and April 22, 2003, as referenced in your RAI response, as well as completed Condition Report 04 - 126.

4. The staff finds Maine Yankee's response to be acceptable.

5. Maine Yankee continues to raise the issue regarding confirmatory surveys versus in-process inspection surveys. Maine Yankee contends that the staff's use of confirmatory surveys at Maine Yankee is a change in staff position, from that provided in Inspection Procedure 83801, and that a backfit analysis should be performed. The staff disagrees with Maine Yankee, and believes that NRC staff actions are consistent with Inspection Procedure 83801.

Based on the type and number of issues identified during the FSS package review, the staff maintains that we have the regulatory basis to perform confirmatory surveys. Inspection Procedure 83801 states that the goal is to conduct sufficient confirmatory surveys and sampling so that the inspector can conclude the licensee's survey program is being implemented in a manner that provides confidence in the results. Surveys should be conducted simultaneously with the licensee during the licensee's final status surveys (as opposed to waiting until after the FSSR has been submitted to the NRC for review and approval). "Sites where work-in-process surveys and sampling have not identified significant weaknesses in the final survey program may not require after the fact surveying and sampling. However, after the fact confirmatory surveys may be required for sites where significant unresolved weaknesses were previously identified. Inspection of a licensee's final survey may include independent confirmatory measurements by the inspector or NRC contractor."

In addition, NRC conduct of confirmatory measurements is consistent with Section 5.10.7 of the LTP. It states that Maine Yankee anticipates that both the NRC and the State may choose to conduct confirmatory measurements.

The staff is confused by Maine Yankee's ongoing resistance to NRC's performance of confirmatory surveys. It continues to be the staff's intent to perform confirmatory measurements. These measurements may be conducted concurrent with Maine Yankee's FSS or they may be conducted after Maine Yankee has completed the FSS but before the FSS Report has been submitted for review and approval. To date, the staff is not aware of any instance in which NRC confirmatory measurements have caused a significant delay to Maine Yankee's FSS schedule.